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# Gleanings *in* Bee Culture



VOL. XLII. OCT. 15, 1914, NO. 20.

# Gleanings in Bee Culture Special PREMIUM OFFER For New Subscriptions

There has recently come to our notice a book appropriately named "The Book of Wonders," which is so entertaining, so instructive, and so complete, that we want to share the discovery with our GLEANINGS friends.

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How the Paper in a Book is Made,	The Story in a Tunnel,
The Foundation of a Skyscraper,	The Story in a Suit of Clothes,
The Story of Submarine Boats,	The Story in the Wireless,
The Story in a Time-piece,	The Story in a Stick of Chocolate

About fifty of the inventions of man are explained in this series of "Stories."

Between the longer topics are numerous paragraphs explaining some of the queries which we all make, yet which are hard to answer, as, "What makes the colors of sunset?" "How do birds find their way?"

Many expressions and customs which originated long ago are explained in these short paragraphs, as, "How did Hobson's Choice originate?" "Why does the barber's pole have stripes?"

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Where the good beehives come from

## The BEEKEEPERS' REVIEW

is now offering a bargain to new subscribers, inasmuch as they are offering the last nine months of 1914 and ALL 1915 for the regular annual price of one dollar. The last nine months of 1914 contain (in connection with many other valuable articles) all the valuable papers furnished the NATIONAL convention at St. Louis last February. We will just mention two of the many papers of note, as space forbids mentioning others. They are two of the very best productions on cellar wintering ever published. One is from Dr. E. F. Phillips, Bureau of Entomology, Washington, D. C.; the other is by Mr. E. S. Miller, Valparaiso, Ind. If you own a bee-cellars, either one of these articles will be well worth the dollar the *Review* will cost you. Mail your dollar to THE BEEKEEPERS' REVIEW, Northstar, Michigan.

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We don't ask you to pay us a cent until you have used this wonderful modern light in your own home ten days, then you may return it at our expense if not perfectly satisfied. You can't possibly lose a cent. We want to prove to you that it makes an ordinary oil lamp look like a candle; beats electric, gasoline or acetylene. Lights and is put out like old oil lamp. Tests at 14 leading Universities show that it

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## HONEY MARKETS

The prices listed below are intended to represent, as nearly as possible, the average market prices at which honey and beeswax are selling at the time of the report in the city mentioned. Unless otherwise stated, this is the price at which sales are being made by commission merchants or by producers direct to the retail merchants. When sales are made by commission merchants the usual commission (from five to ten per cent), carriage, and freight will be deducted; and in addition there is often a charge for storage by the commission merchant. When sales are made by the producer direct to the retailer, commission and storage and other charges are eliminated. Sales made to wholesale houses are usually about ten per cent less than those to retail merchants.

### NATIONAL BEEKEEPERS' ASSOCIATION GRADING RULES

*Adopted at Cincinnati, Feb. 13, 1913.*

Sections of comb honey are to be graded: First, as to finish; second, as to color of honey; and third, as to weight. The sections of honey in any given case are to be so nearly alike in these three respects that any section shall be representative of the contents of the case.

#### I. FINISH.

1. *Extra Fancy*.—Sections to be evenly filled, comb firmly attached to the four sides, the sections to be free from propolis or other pronounced stain, combs and cappings white, and not more than six unsealed cells on either side.

2. *Fancy*.—Sections to be evenly filled, comb firmly attached to the four sides, the sections free from propolis or other pronounced stain, comb and cappings white, and not more than six unsealed cells on either side exclusive of the outside row.

3. *No. 1*.—Sections to be evenly filled, comb firmly attached to the four sides, the sections free from propolis or other pronounced stain, comb and cappings white to slightly off color, and not more than 40 unsealed cells, exclusive of the outside row.

4. *No. 2*.—Comb not projecting beyond the box, attached to the sides not less than two-thirds of the way around, and not more than 60 unsealed cells exclusive of the row adjacent to the box.

#### II. COLOR.

On the basis of color of the honey, comb honey is to be classified as: first, white; second, light amber; third, amber; and fourth, dark.

#### III. WEIGHT.

1. *Heavy*.—No section designated as heavy to weigh less than fourteen ounces.

2. *Medium*.—No section designated as medium to weigh less than 12 ounces.

3. *Light*.—No section designated as light to weigh less than ten ounces.

In describing honey, three words or symbols are to be used, the first being descriptive of the finish, the second of color, and the third of weight. As for example: Fancy, white, heavy (F.W.H); No. 1, amber, medium (1-A-M), etc. In this way any of the possible combinations of finish, color, and weight can be briefly described.

#### CULL HONEY.

Cull honey shall consist of the following: Honey packed in soiled second-hand cases or that in badly stained or propolized sections; sections containing pollen, honey-dew honey, honey showing signs of granulation, poorly ripened, sour, or "weeping" honey; sections with comb projecting beyond the box or well attached to the box less than two-thirds the distance around its inner surface; sections with more than 60 unsealed cells, exclusive of the row adjacent to the box; leaking, injured, or patched-up sections; sections weighing less than ten ounces.

HONEY-GRADING RULES ADOPTED BY THE COLORADO STATE BEEKEEPERS' ASSOCIATION,  
DECEMBER 13, 1911.

**FANCY WHITE.**—Sections to be well filled, comb firmly attached to all sides and evenly capped except the outside row next to the wood. Honey, combs, and cappings white, and not projecting beyond the wood; wood to be well cleaned; no sections in this grade to weigh less than  $13\frac{1}{2}$  ounces.

**No. 1.**—Sections to be well filled, combs firmly attached on all sides and evenly capped, except the outside row next to the wood. Honey white or very slightly off color. Combs not projecting beyond the wood; wood to be well cleaned; no section in this grade to weigh less than  $13\frac{1}{2}$  ounces.

**CHOICE.**—Sections to be well filled; combs firmly attached; not projecting beyond the wood, and entirely capped, except the outside row next to the wood. Honey, comb, and cappings from white to amber, but not dark; wood to be well cleaned; no section in this grade to weigh less than 12 ounces.

**No. 2.**—This grade is composed of sections that are entirely capped, except row next to wood, weighing from ten to twelve ounces or more, also of such sections as weigh 12 ounces or more, and have not more than 50 uncapped cells all together, which must be filled. Combs and cappings from white to amber in color, but not dark; wood to be well cleaned.

**EXTRACTED HONEY.**—Must be thoroughly ripened, weigh 12 pounds per gallon. It must be well strained, and packed in new cans. It is classed as white, light amber, and amber.

**STRAINED HONEY.**—This is honey obtained from combs by all other means than the centrifugal extractors, and is classed as white, light amber, amber, and dark; it must be thoroughly ripened and well strained. It may be put up in cans that previously have contained honey.

**BOSTON.**—No. 1 and fancy new white comb honey is quoted at 16 to 17; fancy white extracted, 11, 60-lb. cans. Beeswax, 30.

Boston, Oct. 3.

BLAKE-LEE CO.

**LIVERPOOL.**—The market for Chilian honey is slow, and there is only a retail trade at late rates. Stocks are heavy. California retails at \$9.60 to \$11.40, and New Zealand at \$10.32 to \$10.56; value of Jamaican, \$6.00 to \$8.40 per cwt. Beeswax market is firm; 25 sacks of Chilian sold at \$42.48 to \$44.34 per cwt.

Liverpool, Sept. 22.

TAYLOR & CO.

*Honey reports continued on page 5.*

# PERFECTION IN WAX RENDERING

has been reached by our process. Ship us your OLD COMB AND CAPPINGS, and secure highest returns. . . . Write for prices and full information.

**THE FRED W. MUTH CO.**

"The Busy Bee Men"

204 Walnut Street

Comb and Extracted Honey Wanted

Cincinnati, Ohio

# The Best Time to Buy Supplies

The season just passed has demonstrated more clearly than ever the necessity for being prepared for a honey-flow BEFORE it comes. If you wait until the season is upon you, the chances are that the greater part of the crop will be lost while you are impatiently waiting for supplies to arrive. It may seem a little early now to think of next season's honey harvest; but the fact of the matter is, this is just the time to order goods for next season.

We are beginning now to replenish our stocks. We shall soon have carload orders coming from the factory. Special orders placed now can have just the attention they need, both here and at the factory, and you may have your goods sent in one of our cars, thereby saving on transportation charges. Regular stock will come straight to you from our warehouse in new unbroken packages, and you can put the goods together in your odd minutes, thereby saving the expense of extra help in the spring.

Our usual discounts for early orders apply again this season—six per cent for cash orders sent in October, the discount diminishing one per cent per month as the season advances. These discounts mean a considerable saving, and you might as well take advantage of the highest by ordering now. No change of prices has as yet been announced, and you may, therefore, order from your present catalog. If your catalog has been mislaid, write us at once and we will send another.

If your season's crop of honey is not yet disposed of, we can give you a good price and handle it promptly. Send samples of extracted and full information as to containers, flavor, quantity, price, etc. We also handle comb honey.

---

C. H. W. Weber & Co.

2146 Central Avenue

Cincinnati, Ohio

# Gleanings in Bee Culture

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NEW YORK.—We quote fancy clover comb honey at 16; No. 1, 14; No. 2, 12 to 13; clover extracted, 8 to 9; buckwheat, comb, 10 to 12; buckwheat, extracted, 7 to 7½; Southern, extracted, per gallon, 50 to 80. West Indian extracted, per gallon, 45 to 50. A quotation of 30 to 35 cts. per pound for beeswax covers the business doing in most qualities offering.

JOURNAL OF COMMERCE.

New York, Oct. 5.

CHICAGO.—The choice grades of white comb honey are held steadily at 16 cts. per lb.; No. 1 at about 15. One cent more is obtained where the wood is allowed for. The amber grades range from 1 to 3 cts. less. Extracted is not moving with any freedom, and prices are weak, while nominally without change in quotations. Beeswax brings from 33 to 35, according to color and cleanliness.

Chicago, Oct. 2. R. A. BURNETT & CO.

CINCINNATI.—There is very little demand for honey at the present time. However, we are selling our comb honey from \$3.00 to \$4.00 per case, according to the quality and who is buying it. Our extracted honey, for the best white, brings 7½ to 10 in crates of two 60-lb. cans; for amber extracted, 5 to 7½. For choice bright yellow beeswax we are paying 30 cts. delivered here.

Cincinnati, Oct. 1. THE FRED W. MUTH CO.

ALBANY.—We have a firm honey market to report. We find, however, much candied comb honey that is difficult to sell at any price. We quote fancy white comb, 18; medium, 16; mixed, 15; buckwheat, 14 to 15. I don't think the new law will be enforced this season. Extracted is quiet at 7 to 7½ for new buckwheat; 8 to 9 for white grades. Beeswax, 32 to 33.

Albany, Oct. 5. H. R. WRIGHT.

ZANESVILLE.—Not much new honey is arriving as yet. There is a fair demand, particularly for comb, best grades of which wholesale at 18 to 20. In a jobbing way prices are 1 to 2 cts. less. There seems to be a better supply and less demand for extracted. We quote best quality white in 60-lb. cans at 9 to 11, according to quantity and quality. For beeswax, producers are offered 31 to 32 cash; 2 cts. more in trade.

Zanesville, Oct. 3. E. W. PEIRCE.

ST. LOUIS.—The receipts of comb honey have been quite large lately, and the demand has been fairly good. There are no changes in quotations, either in comb or extracted honey. We are still quoting No. 1 white comb, 24 sections, at \$3.35 to \$3.50; No. 2, \$3.00 to \$3.25; light amber, \$2.50 to \$3; extracted, from 5 to 7½, according to quality, flavor, and quantity. Beeswax is lower, and now quotable at 30½ for prime; inferior and impure, less.

R. HARTMANN PRODUCE CO.

St. Louis, Oct. 7.

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., OF GLEANINGS IN BEE CULTURE, PUBLISHED SEMI-MONTHLY AT MEDINA, OHIO, REQUIRED BY THE ACT OF AUGUST 24, 1912.

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(Signed) E. R. Root,

Sworn to and subscribed before me this 6th day of October, 1914.

(Signed) FRANK SPELLMAN.

[Seal.]  
(My commission expires Feb. 17, 1917.)

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# Gleanings in Bee Culture

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A. L. BOYDEN, Advertising Manager

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THE  
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(Please use coupon below, check-  
 ing the numbers of items wanted)

The pamphlets and booklets listed below are of more than ordinary interest.

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**American Bee Journal, Hamilton, Illinois**

# Gleanings in Bee Culture

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## EDITORIALS

### Our Cover Picture

We believe that there are few places in the world where there is such an institution as a "bee-market," for, except under certain rather peculiar circumstances, there would hardly be an occasion for any thing of the kind. In Holland, however, there is a flourishing market in bees, which is an annual affair. This is described by Hans Matthes, on page 804, and is illustrated on our cover for this issue.

### Wintering in Large Quadruple Winter Cases a la Holtermann

We are making our plans to winter one yard of bees in some of those large winter cases, four hives to the case, the same as used by R. F. Holtermann and others of Canada. We shall also put a certain number of colonies in the same yard in regular double-walled hives, with the view of comparing the difference between the two lots of bees. The results will be given later.

### Feeding Bees with Honey

IN Straws in the issue for Oct. 1, Dr. Miller believes that honey is worth 5 cts. per lb. more as a winter food than sugar syrup. While we believe the doctor's estimate is high, there may be some truth in his contention. If it were not for the danger of bee disease, the low price of cheap honey would make an added reason for using honey in place of sugar. However, there are probably many beekeepers who have medium-grade extracted or their own that they know to be free from any possible infection. Such honey can readily be fed to bees at a considerable saving; but all honey intended for winter food should be of the very best quality. Honey-dew honey and aster honey are of doubtful value. While bees may winter on them sometimes, it is attended with some risk. Such honey should be used for spring feeding and early fall feeding to raise young bees.

In feeding honey it should be diluted

with water half and half. We have been feeding up one yard on Porto Rican honey. This was selected not only because it was cheap, but because no bee disease has ever been known in Porto Rico, and for a year or two back there have been very strict quarantine regulations on the importation of bees and queens to Porto Rico. The bees fed on this Porto Rican article have built up very satisfactorily, and have done well—better than those hauled to the swamps.

### Why it Costs in the Neighborhood of Ten Cents a Mile or a Dollar a Day to Run the Average Automobile

ELSEWHERE in this department the statement is made that we charge up our bee-yards, in moving bees from point to point, the rate of 10 cts. a mile. To the uninitiated this looks like a very heavy charge. The question might be asked if we could not move the bees for less money per mile if we were to use a larger truck. The cost would be somewhat less per colony, it is true, but there would be a correspondingly larger depreciation expense, and wear and tear on the more expensive tires. But the same man who would operate a small automobile truck could run a larger one. But the big machine would be unwieldy if used in going to and from the yards for light loads, and for the great bulk of the hauling would be too slow. Most of the loads can be accommodated on the small truck with the additional advantage of less cost of upkeep and greater speed.

In this connection, every one who buys an automobile truck or a pleasure vehicle should understand very clearly that the cost of operation does not stop at the first cost of the machine and the price of gasoline and oil consumed per mile. The principal expense is the depreciation and tires. An average set of tires will run from three to four thousand miles, and cost \$100 per set. This mileage is the average for one year. The average automobile will cost about \$1000, and the depreciation the first year

is about 30 per cent, and then 10 per cent each for the two years following, or 50 per cent in three years. The repairs will run from \$50.00 to \$100.00 per year. This means that the average automobile, either truck or pleasure-vehicle, will cost about \$1.00 per day exclusive of the cost of gasoline and oil, which will be from 1 to 1½ cents a mile, or a total cost of 10 cts. per mile. After looking over these figures the average person will conclude he cannot afford an automobile; but if he will stop and figure up the cost of a horse and buggy or wagon he will find the horse and rig will run considerably more per mile and considerably behind the machine in speed and range. A man with a self-propelling vehicle can do nearly five times the work in the same time.

If one buys a Ford automobile at something around \$500, the cost of depreciation and tires will run about a half; and in buying cheap machines one should be slow about buying a new and untried make. The Ford has long since proven itself to be a first-class machine.

A practical conclusion of the whole matter is, that one whose income is less than three dollars a day cannot afford to run a pleasure vehicle costing \$1000; but even at three dollars his family expenses will have to be cut to \$2.00. A truck for one's business should be considered on another basis.

### Grumbling over the Net-weight Law; Will it be a Nuisance or a Blessing?

WE hear some grumbling over the net-weight law as it applies to comb honey. Many producers say they are going to quit the production of honey in the comb, because they cannot stand the nuisance of marking every single section. This will be a serious mistake. In the first place, the national net-weight law need not be any great annoyance to any one. We might as well make up our minds to conform to it first as well as last, and the sooner we do it the better. The law is now in effect, and he who will not mark his comb honey on interstate business will be rendering himself liable; and the man who is liable is the shipper, whether he be the producer or the dealer.

In the second place, it would be sheer folly to give up comb-honey production because of the fancied inconvenience of the net-weight law. Comb honey is now demanding comparatively good prices; but if every one rushes into the production of extracted honey and quits that in the comb, the price of extracted will sag worse than it

is doing now. In the mean time comb honey will begin to soar. Those who stick to comb-honey production during 1915 with the other fellows out of competition will find a ready market at prices that will please. Let the unthinking and the careless go out of the business if they like; but the readers of this journal will find that marking the net weight on their comb honey is a comparatively simple job after they learn how.

In the end, we believe that the net-weight law will boost the production of comb honey, because it will insure a better article and a more uniform grading. The one thing that has handicapped the comb-honey business and demoralized prices has been the habit of some to put their combs—light, heavy, and medium—all in one case. The net-weight law will make it necessary to grade the sections carefully according to weight and filling; and this very compulsion will, in the end, result in better prices and a more stable market for comb honey.

---

### The Price of Table Honey not Materially Affected by the War in Europe

BOTH comb and extracted honey for table purposes are more than holding their own—at least for the present. Indeed, there has been a slight advance in some quarters. Some dealers have been charging more for their comb honey to make up for the loss occasioned by the net-weight law. This is only natural. Extracted clover is holding firm. How long this condition can be maintained cannot be determined. Comb honey after the holidays always has a tendency to slump a little. There is no logical reason for this except that honey in the comb cannot readily be shipped in severely cold weather without danger of breakage or leakage. Furthermore, after the first half of the winter is already over, there is the greater probability of the comb honey granulating before it can be sold.

The fact that the surplusage of the enormous production of fruit in our Western States, as mentioned elsewhere, cannot be disposed of as heretofore in the markets of Europe will cause a glut in the markets of this country. A low price on fruit generally has a tendency to depress the price of table honey—or at least that has been the history of the past. But there is another factor in our favor this year that is to be considered. This overplus of fruit will have to be taken care of. The canning-factories will be doing a bigger business, for it will be a good time now to stock up

when fruit is cheap or will be cheap. It is possible and even probable that these factories will see that the large advance in the price of sugar will warrant them in taking advantage of the very low price on honey of medium grades. This would have the effect of disposing of the superplusage of fruit, and at the same time increase the demand for the cheap honeys. When the canning-factories get to know that honey is superior to sugar for canning, and this year far cheaper, they will begin to use it in large quantities. The combination of these commodities ought to have a tendency to relieve both industries. The next thing is to get them together.

Beekeepers everywhere ought to sound the slogan, "Use honey for canning fruit and baking." Talk it to your neighbors; visit your canning-factories if you have them. If you have no cheap honey, write to your nearest commission house, and you will doubtless be able to get all you desire, both as regards quality and price.

### Our Swamp Beekeeping

SPEAKING about swamp yards, our operations at these places are drawing to a close, and the bees are being hauled home preparatory to being placed in our mammoth bee-cellars. Two weeks ago there was a severe freeze in the vicinity of our Hudson yards, some thirty miles away. This killed even the asters. As it was not necessary to keep the bees there any longer they are now being brought home. Did our swamp beekeeping pay? We think it did, in spite of the fact that we charged up against the bees 10 cts. per mile for truck hauling.

#### SWAMP BEEKEEPING VERSUS FEEDING UP

##### CHEAP HONEY NEAR HOME.

One of our outyards near home was left in its original location instead of hauling it into the swamps. To this we fed cheap Porto Rican honey, not only because the honey was of good quality, but because it was free from bee disease. Foul brood has never been known in Porto Rico, and the strict quarantine regulations against the importation of bees, queens, colonies, or combs will probably prevent the disease from getting into the island. For that reason we have thought that the honey from that island would be perfectly safe to feed without boiling. The expense of building up this yard on Porto Rican honey will be a little more than the expense of operating the bees at the swamp yards where we did no feeding; but the increase on this Porto Rican honey has been very satisfactory, and the boys report that the bees are in excellent condition.

The question may be asked why we charge ten cents a mile for hauling bees with our own automobile truck. Experience shows that it cannot be operated for less. A horse-drawn vehicle or wagon will cost as much because so much of the time in the winter the horse is "eating his head off."

A yard 30 miles away would have to have \$6.00 entered against it for one round trip of 30 colonies on the basis of 10 cts. a mile. If there were 60 colonies at the yard, that would make a charge of \$12.00, or at the rate of 20 cts. a colony. Add to this the cost of operation by local men near the bees, and the entire charge would be about 50 cts. per colony.

At the outyard near Medina we fed about 20 lbs. of Porto Rican honey. This would make a charge of \$1.00 per colony, plus the labor. It will be seen that, even when bees are 30 miles away, the balance is in favor of the swamp proposition. But we have several yards, 7, 10, and 15 miles away, hence the truck hire per colony will be correspondingly reduced. For example, a yard ten miles away would have a truck charge of 7 cents per colony. Taking every thing into consideration, the trucking, even at a charge of 10 cts. per mile, providing there is bee pasturage 10, 15, or 20 miles away, is a saving over feeding. If the aster honey causes dysentery later the difference may be in favor of the fed colonies.

### Candy vs. Sealed Stores

WE have been somewhat surprised to receive a number of inquiries from beekeepers who are planning to rely on candy almost entirely for winter stores, and who wish to know the latest developments in the making of the candy. Our feeling all along has been that the specific value of candy lies in the fact that it can be supplied during cold weather when the feeding of syrup would be impossible. It is true that we have ventured the suggestion once or twice that candy *might* some time be a safe all-winter food instead of syrup. However, in view of the fact that there have been some reports of failure it would seem to us an unwise procedure at present for any beekeeper to plan in advance to use candy alone, especially when there is still time in most localities, at least, to feed sugar syrup. There may come a time when the making of bee candy will have become so perfected that it can be relied upon in the fall, winter, and spring; but we cannot consistently advise that now. We believe that candy should be used in cases of emergency to prevent actual starvation during cold

weather. Our experiments have been conducted with a view of determining just how far such candy may be relied upon, the results of which have been published in these columns from time to time.

Especially at this time when the price of sugar is "sky-high," as one beekeeper put it, the cost of providing winter stores is indeed a serious question. It must be remembered that the labor required in making candy is an item of considerable importance. We have had no experience ourselves in making the Fuller candy; but the hard candy is apt to cost nearly twice as much as an amount of sugar syrup which would last the bees the same length of time. Of course this is only an approximate figure, as so much depends upon the method of making, the facilities at hand, etc.

Usually some honey is added to the hard candy. Of course, such honey, by reason of the high and long-continued heat, is rendered sterile so far as any brood disease is concerned. However, sugar syrup is, of course, sterile in the first place.

Many beekeepers will prefer to feed honey instead of sugar syrup this fall because of the high price of the latter. It must not be forgotten that honey bought on the open market is an unsafe food for bees, owing to the danger of introducing foul brood of one type or the other. If the honey has been heated, as explained in the editorial in the last issue this danger, especially in the case of European foul brood, is vastly less. However, it will be well for all beekeepers, if they do not know the source of the honey, to err on the safe side.

We hope that there will be few who, on account of the high cost of sugar, will run any risk in regard to the quantity of the stores. Wintering a colony on barely enough stores is always pennywise and pound foolish; and it is no less so under the present conditions.

---

### The War, and its Effect on the Price of our Domestic Honeys for Manufacturing Purposes

WE have received numerous letters from the beekeepers in the Southern States asking what the matter is with the honey market. They are saying they cannot get any offerings for extracted or medium grade. The situation will be a little better understood when we state that we have positive knowledge of some West Indian honey of good quality being sold in the New York markets as low as 42 cents a gallon. This honey formerly went to Europe like all

other South American and West Indian honey, and brought good prices, ranging around a dollar a gallon. It will, therefore, be seen that South American honey and other West Indian honeys that come into the United States will net their producers practically nothing after paying freight, commission, and duty. The duty on honey now is 10 cents a gallon. Let us suppose that the price in New York is 42 cents a gallon. Deducting from this 10 cents, it will leave 32 cents, or nearly 3 cts. per lb. Out of this must come package, freight, and commission. It can easily be seen that the producers in South America and the West Indies, with their large crops on hand, and with no prospect of selling it at all in the European markets, will probably unload in the United States, and we cannot blame them. We would do likewise. Possibly they may hold it until after the war. "After the war"—no one knows when that will be. In any event it means that these honeys will come to the United States and set a lower level for a good part, perhaps, of our domestic Southern honey, and for Northern honey used for baking and canning, and general manufacturing purposes. Of course, it does not follow that because foreign honeys are cheap that domestic cheap honey must fall to the same level. Nor will it.

We are also reliably informed that the Rocky Mountain districts that have been producing carloads of fruit have almost no market for their product. They have hitherto shipped it to England and Germany. America produces more fruit than she can consume. The surplus hitherto has been going to Europe at fair prices. In the same way that the fruit interests of the Western slope are suffering, honey in that region has been coming in for its share. But fruit is perishable unless it is canned; but honey can be kept till "after the war," whatever that may mean.

The war-lords of Europe are committing an awful crime against civilization. The individual members of that civilization, the women and children and the non-combatants, and the peace-lovers out of the war-zone are going to be the ones to suffer. If the wrath of the world would do any good toward putting a stop to this awful destruction of life and property, the conflict would speedily come to a close. But it begins to look now like a world's civil war; and all for what?

While we are apparently sounding a pessimistic note, we are optimistic enough to believe that the great Creator of worlds, as he always has done, will bring good out of evil.

Dr. C. C. Miller

## STRAY STRAWS

Marengo, Ill.

IN THE LONG RUN I don't believe it pays to cage a second virgin in a nucleus awaiting the laying and removal of the first. A dozen or so that I have tried this year were as long about laying after being out of the cage as others were from time of birth. But it's a convenience sometimes when you have a virgin that you have no immediate use for. [We do not practice the caging of a virgin in a nucleus except when we have more queens than nuclei; but it is convenient sometimes, as you say, and very often it saves valuable time.—ED.]

YOU ASK, Mr. Editor, p. 619, whether I replace all queens when two years old. No. Also, whether I replace my failing queens with young and vigorous ones. Sure. More than that, I like to replace a queen that doesn't come up to the mark, whether she is failing or not, young or old. But a good queen is not by any means always a failing queen when two years old, and as a rule will be superseded in good time without my meddling. Others say their queens do poorer work after they have passed their first year; and if I had such queens I would replace them.

Now and again some one advances the idea that where locations within a few miles differ in honey-flow, the mere dividing into two or more apiaries will increase the total income. Fallacy! If bees in my home yard average 100 pounds per colony in even years, and nothing in odd years, and if 5 miles away the yield is 100 pounds per colony in odd years, and nothing in even years, and if I have 10 colonies in each place, I'll get 1000 pounds each year, or 2000 pounds in two years. If I keep the whole 20 at home I'll get nothing one year and 2000 the next. So it's 2000 each two years, whichever way you do. The only advantage in dividing is the more regular income, which is hardly enough for the extra bother.

You ask, Mr. Editor, p. 749, "What element is there in honey that the bees need that is not found in good pollen and sugar syrup?" Tote-fair, please. Pollen was not in the game. You say, "When natural pollen comes in the spring the bees will probably get all the elements they need." Like enough, for they'll get nectar then. Still, I'll answer your question by referring to the A B C and X Y Z. There I find this: Honey contains small percentages of a number of substances which greatly help in detecting adulteration by their absence, which is equivalent to saying that a number

of substances are found in honey that are absent in sugar syrup. Just what those substances are I do not find recorded in the same authority, as it might well be, although I find on the same page that honey contains phosphates. These different substances I believe bees need. They are not found in sugar syrup, and I don't believe they're found in pollen. As you say, the subject is important. I can hardly say that I know honey is 5 cents a pound better than sugar; but my belief in its superiority is so great that more than once I've fed small amounts of section honey rather than to feed sugar at 5 cents a pound. [But, supposing pollen was not in the game, it is usually in the hive. If the colony be fed good sugar syrup, and has plenty of pollen, does it not have practically all the necessary food elements? However, we are not saying you are not right, and our columns are open for a further discussion of the subject. See what R. F. Holtermann and Ila Mitchener say elsewhere. See editorial.—ED.]

A PERIODICAL warning should be sounded against careless mailing of diseased brood. Here's what happened: Aug. 24 our family was absent from home from 7 a. m. till 3 p. m. Arriving home I found in the mail-box a brood-comb containing American foul brood, which the rural carrier had deposited there at 9 a. m. It was done up in pasteboard with one corner open, allowing free entrance for the bees! No; no harm came of it. The bees had never found it, as shown by the honey daubed over letters and papers, which they would have licked up if they had found it in the open box. The secret of escape was an exceptionally cool day, with mercury never above 67 degrees. But it was not the sender's fault that I didn't have an experience I'm not hankering for. But I'm not the one to send samples to, any way. Dr. E. F. Phillips, Agricultural Dept., Washington, D. C., is the man for such fragrant morsels. [Some two or three years ago we used to be annoyed not a little by packages of foul brood being sent to us in broken and leaking condition. Fortunately, in every case they were delivered inside of our offices, where they were promptly taken care of; but no packages have been received here during the last year or so, because they have all been sent to Washington. But even when sent to Uncle Sam they ought to be properly packed. Nothing less than a stout wooden box should be used, and in addition the piece of comb should be wrapped in paraffine or oiled paper.—ED.]

J. E. Crane

## SIFTINGS

Middlebury, Vt.

I believe the honey reports in the Aug. 1st issue of GLEANINGS are the most complete we have ever had.

\* \* \*

A neighbor recently brought me a squash-blossom with seven dead bees in it, evidently caused by several unseasonably cold days. It shows how rapidly unfavorable conditions deplete our hives.

\* \* \*

Dr. C. C. Miller, page 403, June 1, refers to liquor advertisements in the large city papers. I ran across something new along this line last week on a wayside guideboard like this: Granville, 5 miles, wet; Wills, 4 miles, dry; Pawlet, 2 miles, damp.

\* \* \*

E. H. Harris, page 628, Aug. 15, tells how to make concrete hive-stands. It looks like a nice thing. One of my beekeeping friends showed me this summer his hive-stands made from slabs of slate, about 18 by 30 inches. These may pay in some places, but would be too expensive in others.

\* \* \*

I am much interested in that thousand-acre swamp. With us I have found the swamp-milkweed to yield honey very freely, while in other years I could find few or no bees on it. I believe the boneset one of the surest honey-plants; and fortunate indeed are those beekeepers who have a supply of it for fall forage.

\* \* \*

It must be a source of much pleasure to the beekeepers of northern Michigan to know that their honey resources are on the increase in the constant increase of milkweed. I have not forgotten the very enjoyable day I spent with Mr. Kirkpatrick, of Rapid City, some years ago, nor the fine sample of milkweed Mr. Ira Bartlett brought to his table. I believe it should be classed with our best honeys. See page 573, Aug. 1.

\* \* \*

Much space is given in the editorial department of GLEANINGS for Aug. 15 to a discussion of the net-weight law, which is certainly timely and helpful. The law will certainly make the putting-up of comb honey more expensive, and the beekeeper should receive more for it. I see no reason why we may not weigh our honey and put the weights on the cases the same as before; but as they would not correspond with the net weights on the individual sections it would most likely lead to confusion and trouble.

On the other hand, we may sell to the wholesale dealer by the case or number of No. 1 combs, as has been practiced for some time, I believe, in the West. One beekeeper of my acquaintance told me he was marking all his sections or cartons "Not less than five ounces." This may be within the letter of the law, but hardly within the spirit of it. In fact, it would seem to nullify the law, making it of no value whatever. [A beekeeper who marks his comb honey "Not less than 5 ounces" would, in our judgment, be rendering himself liable. By so doing he is actually concealing the weight of the contents of the sections. The intent of the law is plainly to give to the consumer a close idea of how much he is buying for the money. The plan pursued by your beekeeping friend would utterly defeat the intent of the law, and we believe that any court in the land would call such a practice a distinct violation.—Ed.]

\* \* \*

You tell us, page 570, Aug. 1, Mr. Editor, that, according to experiments made by Mr. Selser, of Philadelphia, a colony of bees can be made for about a dollar's worth of sugar. Well, just what do you mean by making a colony? From some experience we have had this season we find that it takes about twenty pounds of sugar to draw out the foundation of a ten-frame hive; as much more to provision them for winter, and half or two-thirds as much to rear young bees to make the colony. Then the frames and foundation will cost about a dollar, to say nothing of the rest of the hive. Then there is a queen to be provided, which, if bought, would spoil another dollar. [In quoting Mr. Selser we meant only the sugar—not the hives, comb foundation, nor extra feeding to put bees into their winter quarters. We have just been out interviewing the foreman of our yard as to how much sugar it takes to draw out ten combs. He pointed out one colony which he thought would be a fair average that drew out six frames of foundation half way on one quart of sugar syrup, half sugar and half water. Another feed like this would cause them to draw the combs clear out; but in order to make the bees do this a feeder must be used that feeds very slowly. We use the Boardman that has only one or two small pinholes. The bees get the syrup very slowly; and this *constant* incoming of feed works a great deal better than a large quantity that is shortly taken up with no more coming in for several days.—Ed.]

# BEEKEEPING IN THE SOUTHWEST

Louis H. Scholl, New Braunfels, Texas.

From all the information in hand, the year 1914 has been one of the biggest honey-crop years that Texas has had. The bees are in splendid condition, and in the cotton belt they are gathering an excellent crop from this source.

\* \* \*

The net-weight law should be studied by our Texas beekeepers and all others, as well as the beekeepers in the North, where this question is receiving so much attention at the present moment. As Agricultural Expert in the State Department of Agriculture, I will prepare a statement concerning this matter, as it pertains to Texas and its beekeepers, for the next issue.

\* \* \*

The European war has had a striking effect on the honey market in this State, Texas, if not in all the Southern States. Cotton is the most important money crop in these States; but since the war came just at the time this fleecy staple was beginning to move to the markets, conditions were deplorable. As a result of this condition, money was very scarce, and the entire population fell into a state of discouragement. Only the most necessary articles were purchased during this time of distress; and since honey is more or less of a luxury, there was no demand for it. Times are decidedly more favorable now, and the honey market is better, which is shown by the fact that orders have been coming in at a very lively clip during the past week. Just what effect the continuance of the war for any length of time will have on the Southern beekeepers is difficult to say.

\* \* \*

The question of the proper amount of rent to pay for a location for an out-apriary has come up very frequently. Since there are such varying conditions and circumstances to determine the price that should be paid, there is no set rule as to the proper rental for out-apriary locations. I have found some persons who did not desire any thing in return for the privilege extended us by permitting us to place an apiary on their land. But as a good location is a valuable asset in extensive out-apriary management we can well afford to remunerate the owner of the land that we use. We have generally figured that a money rent of \$10, and some honey also, is a fair com-

pensation for a location where 100 colonies can be kept. Since my apiaries contain only about 50 colonies, I have paid just half the above amount. In fact, each one of my locations costs me now five dollars in cash and about five dollars' worth of honey a year. Those property-owners who at first did not want any rent at all have been educated to take it.

\* \* \*

## THE TEXAS HONEY MARKET.

Present indications are to the effect that the honey market is stiffening up considerably, judging from the large number of honey orders coming in. There is also a better movement of honey to market in several of the Southwest-Texas sections just visited by the writer. The greater part of the Southwest Texas crop is marketed, and this means the bulk of the entire Texas honey crop.

Good prices were obtained by most of the beekeepers in this section who had an early crop and disposed of it early. A little later the market price was considerably depressed on account of the great rush of honey to the markets, and underselling on the part of a large number of beekeepers who got their honey ready for the market a little later in the rush, and who were too anxious to move their crop.

There is still a large quantity of honey unmarketed; but much of it will be moved before winter. Such as is already packed as bulk comb honey, as well as extracted, is subject to granulation as soon as cold weather comes on, and it is wise, therefore, to get it off to market.

To overcome this serious objection I have but very little honey packed in advance of orders. It saves trouble from granulation, and gives me the further advantage of getting the freshly packed honey to destination in first-class condition.

My new honey-house, with a good warm sub-basement, provided with heating apparatus to permit keeping this space warm in extremely cold weather will enable me to keep over winter any amount of comb honey. Any extracted honey that may be granulated can easily be reliquefied, since we heat all of the liquid honey to pack the comb honey with, and are equipped for doing it. This will save worrying over having to dispose of the honey before winter, and helps us to get the better prices in the spring.

# BEEKEEPING IN CALIFORNIA

P. C. Chadwick, Redlands, Cal.

So far as my knowledge of the matter runs, we have had less destructive forest fires during the past summer than for several years past.

\* \* \*

Some advice that does not conform with my ideas has recently crept into print as to what to do with drone comb. The place for drone comb is in the melting-tank as quickly as possible. The only place I ever care for drone comb is to mass a few combs on colonies from which drones for mating are desirable. Any colony will patch in enough drone-cells for practical purposes. Out of 4000 combs in my apiary I have less than half a dozen that are not drawn on full sheets of foundation. Beekeeping on extensive lines leaves no place for drone culture.

\* \* \*

In those localities where bluecurl abounds bees are working finely, and bid fair to go into winter quarters with an abundance of young bees and combs well filled with both honey and pollen. There is very little pollen, however, from this plant. A very peculiar and interesting thing in this connection is the fact that bees working on it get entirely covered with a light greenish-yellow pollen while gathering honey, but make no attempt to collect it to store. Were it not for the great stimulative effect of the late flow I would prefer not to have this honey in my combs, for it will candy in sealed cells within a few weeks. If extracted it becomes almost a solid mass of hard candy like honey in a few days, yet it is one of the whitest of all our honeys, not taking into consideration soil, climatic conditions, elevation, etc.

\* \* \*

During my requeening operations this season I tried the plan of mating a virgin above an excluder with an entrance above and one below. The test was made on about 75 colonies. Where there was an old queen below, the plan, in almost every case, was a failure. Where the old queen was removed, and a cell given both above and below, both cells were accepted and the virgins could be found for several days after hatching; but as soon as one became mated, the other (in the majority of cases) disappeared. I was able, however, to get quite a number mated, both above and below, but removed them, as soon as mated, for safety. Eight or ten colonies were left with mated queens both above and below; but after a month's time but two colonies contained both queens.

The two were laying nicely, with a large amount of brood both above and below. I also tried the project on three super hives, using two excluders to separate the queens further, but my success was little better. One of the valuable features of this plan I found to be the almost absolute certainty of getting a mated queen in one of the divisions and thus avoid the necessity of making the second trial, to say nothing of the advantage of getting the colony re-established as quickly as possible.

These experiments were tried without using brood above, so it is possible my success would have been greater had I used a frame or two of brood above. I expect to give the latter plan a thorough trial next season.

\* \* \*

There is considerable agitation among employers in general over the initiative ordinance proposed, by which the hours of labor are restricted to eight hours per day. This ordinance is to be voted on at our November election, and is being fought bitterly by fruit-men as well as generally by ranchers, beekeepers, and all who employ labor. It makes all the difference in the world as to whether you are the employee or the employer as to how you feel. But for one feature of the law—that which makes it a penalty to work or permit help to labor more than eight hours per day, regardless of the consideration of extra compensation for additional time that could be used to advantage in cases where both the employee and the employer were willing—I would be heartily in favor of the law. This one feature, however, makes it quite objectionable to both parties in many cases. Morally I believe the world would be much better if the laborer were given a better chance to relax from a dorous labor long enough each day to get better acquainted with his family, and have more of the responsibility of growing sons, who, to a great extent, need the influence of the father. This world is not made of dollars alone, and our people are finding it out more and more as time goes by. Our first consideration should be for the moral uplift and betterment of our people; and if an eight-hour day will help, we should have it. Should the blight of saloons be driven from our State, the effect would be far greater; for there is no use denying that the retreat of a certain class of our laborers is more apt to be the saloon than the home.

# CONVERSATIONS WITH DOOLITTLE

At Borodino, New York.

"Do bees on one trip visit different kinds of flowers in gathering honey, or do they go to those of one species only? If one species only, how comes it that we get mixed honey in the same comb?"

I have repeatedly seen bees at work on both the gooseberry and the currant, where the bushes were side by side in rows, although the gooseberry seemed to yield the more nectar, or, at least, the bees spent much more time on each blossom of the gooseberry than on the currant. I have also seen them go from the black variety of raspberry to that of the red, and *vice versa*, though the red variety seems much preferred. Then I have seen a single bee visit the blossoms of red, white, and alsike clover, spending more time on each little floweret of the red than on the others. But this cannot be taken as conclusive proof that bees gather honey or nectar promiscuously, for I do not believe they do. It will be observed that all of the above were of the same species of plants, or very nearly so. Teasel and basswood are in bloom at the same time in this locality, but never, in all of my observation, did I ever see a single bee go from teasel to basswood, or from basswood to the teasel when they were gathering nectar. Since the nectar from basswood needed very little evaporation to make it the consistency of honey, while the nectar from teasel is always very thin, I supposed that bees would naturally desert the teasel flowers for the basswood, but I did not see them doing this, even where limbs of the basswood hung down with their flowers almost touching the tops of the teasel-plants. In one instance a field was sown to buckwheat very early, so that the bloom came in before the teasel was out of bloom, yet never a bee went from one to the other, so far as I could discover, though a portion of these fields lay side by side.

But about the mixing of the different honey in the combs: Bees do not seem to be as careful in this matter as we are, for often when one bee comes in from the basswood or teasel field she deposits her load in a cell, to be followed a little later by her sister, who is working on buckwheat, and who does not seem to realize that all honey from white blossoms should not go in the same cell. Even though the color, taste, or smell be not the same "it's honey all'e samee." In this locality we often have our prospects of the best price for a nice white teasel or basswood honey knocked down to a second or third place by some farmer putting in a

field of buckwheat the middle of June instead of the 10th of July.

"On going to the beeyard one morning in early August I found several hundred little round caps of wax on the alighting-board near the entrance of a hive. I called the attention of an old beekeeper to these a little later, and he said it was a case of robbing. Do you agree?"

I do not agree. Some suppose that such round caps indicate the uncapping of cells of honey, either by robbers or preparatory to the carrying of the honey from one position in the hive to the other; but this is a mistake, as the cappings of the honey-cells are gnawed off in little fragments, and not in the round form spoken of. So far as my observation goes, and I have discovered these round caps several times, the finding of such caps signifies that drones are hatching out, as any one can prove by taking the pains and time to examine, for he will find that the drone, before emerging from his cell, bites the cover of the cell entirely off by a smooth cut, while the workers leave only fragments of the cappings of their cell-coverings when emerging. The queen cuts off the capping of her cell the same as does the drone, except, as a rule, a little piece on one side is left, which often acts like the hinge to a door, this door often being closed after the queen has gone out, through some careless worker rubbing up against it. Where no such hinge is left, then the caps to the queen-cells are tumbled out of the hive the same as are the drone cappings; but in no case, probably, would there be as many caps from queen-cells as our correspondent mentions.

If the little door closes as mentioned above, the bees often make it fast by waxing or using propolis, so that the inexperienced beekeeper is often deceived into thinking that the queen has not yet emerged from her cell, as I was once when I cut out three such cells from a parent colony which had swarmed, having a "best queen," giving these cells to nuclei. Of course the nuclei remained queenless till "live" cells were given them later. If often happens, as soon as the queen has emerged from her cell, that a worker goes into the cell to partake of the royal jelly left unused in the cell, after which the cell-cover is crowded back by the ever traveling bees, and the worker is a prisoner, causing even some good apiarists to claim that workers sometimes develop in queen-cells. It is well to understand all these little things in bee culture.

# GENERAL CORRESPONDENCE

## SPRAY-POISONING AND EUROPEAN FOUL BROOD IN COLORADO

A Reply to Dr. Phillips' Letter in August 15th Gleanings, page 615

BY WFSLEY FOSTER

In the August 15th issue, page 615, Dr. Phillips gave it as his opinion that the trouble complained of in Colorado, of bees dying, was not the direct result of spraying, as has been alleged, but was due to European foul brood. It seems this "raised a storm" of protest that this was not true in most cases, at least. At all events, our correspondent, Wesley Foster, replies:

Losses of bees from spraying have been reported to me from Montrose, Delta, Mesa, and Fremont counties for three years. The most disastrous losses that the writer has observed were at Canon City, in Fremont County, two years ago. The leaf-roller threatened the destruction of the orchards, and spraying was recommended during fruit bloom, which was done. The destruction of hundreds of colonies followed, and practically all colonies within range of the fruit-trees were reduced in numbers very seriously. The affected bees would be seen crawling and hopping away from the hives early in the morning and in the evening, but would not be so noticeable during the day. The abdomens would be swollen, and the bees able to fly but a few inches. A few minutes later one would notice the same bees scarcely able to crawl, many dying soon, while others seemed to rally and fly away. In the evening the bees would cluster in little bunches in the grass or in depressions in the ground about the hives. Ditches and holes in the ground would often be found full of dead and dying bees. No brood that I saw at that time appeared to be affected except from chilling and lack of care. I think that but very little brood if any is affected by the poison, as it seems the bees rush out of the hive in agony as soon as they get any of the feed. The poisoned nectar must be carried into the hives by the field workers, for newly hatched bees will be seen crawling away from the entrances in large numbers, probably getting poisoned with their first sip of nectar from the cells. It seems probable that the poison acts less rapidly upon the bee when the nectar is in the honey-sac than when the nectar is taken for food.

In this connection I might say that there has been considerable doubt whether bees can be poisoned by arsenical spray, from the fact that the spray as mixed by most fruit-growers is hardly strong enough to kill any thing but the larvae of the codling moth.

I do not know what strength liquid was used in spraying for the leaf-roller at Canon City, but it was probably about the same as used for the codling moth.

### SPRAYING AND COVER CROPPING.

All successful orchardists now are realizing the importance of some cover crop in the orchard. These cover crops have been put in very largely during the last four years, and the time is not far off when all the commercial orchards will have some crop—alfalfa, red clover, sweet clover, or alsike sown under and between the trees. The orchardist who sprays his trees during bloom is not the peril, although he often does serious damage. The spraying of the trees from one to seven times during the growing season of the apples when the cover crops are in bloom is the menace, and has been the cause of most of the losses in western Colorado this year. It was noticed in Delta County, that, right after the large alfalfa-fields were all cut, and before sweet clover came in bloom, the red clover in the orchards was visited very largely by the bees; and right at this time, which was late in June, spraying was being done. In one week whole apiaries were either destroyed or rendered nothing but nuclei. Dozens of colonies swarmed out and absconded, leaving honey and brood in all stages. New swarms, hived previously to the scourge of poisoned nectar, absconded also, after drawing comb and getting nicely started at brood-rearing.

Many of the beekeepers in Montrose and Delta counties saved their bees by moving away from the orchards.

I visited Montrose and Delta counties the latter part of August, and spent some time in Mr. J. G. Brown's apiary at Montrose. This is the apiary that he gives an account of in GLEANINGS for August 15, page 641. Mr. Brown told me that he had not noticed the brood as being affected to any great extent, the main symptom being the adult bees hopping about in front of the hives and bunching up in little clusters. This was in

evidence still when I was there, and I gathered up several hundred, although the numbers were nothing like as numerous as Mr. Brown said they were earlier in the season.

One thing that I had not previously known was that the poisoning gave many of the bees a malady which apparently was dysentery. The yellow deposit on the hives and in front of the entrances was plainly visible. I examined a number of apiaries in Montrose County, where spray-poisoning had been reported, and I found no evidences of European foul brood. Then in company with J. C. Matthews, George Nichols, E. D. Nichols, and J. G. Brown, I went to Mr. R. W. Ensley's home in Delta County. Mr. Ensley had lost a great many bees at his home yard, and had moved most of the bees away; but we examined a dozen or more colonies, but could find nothing that resembled the descriptions of European foul brood. Mr. Matthews, Mr. Brown, Mr. E. D. Nichols, and his son, George Nichols, then left in Mr. Matthews' auto for Montrose, and Mr. Ensley and I started the next morning for Paonia, where Mr. Ensley secured the sample of brood which Dr. Phillips reported as affected with European foul brood. Paonia is nearly thirty miles from Mr. Ensley's; and after stopping on the way to examine one apiary we reached Paonia by night.

During the next two days we examined practically all the apiaries within a radius of six or seven miles, and found no European foul brood more than  $1\frac{1}{2}$  miles from the apiary where Mr. Ensley secured the sample. There are three apiaries affected that are so far known. There are none but Italian bees in the district; and in one apiary which was not seriously injured by the spraying, though European foul brood is quite plentiful, a good crop of honey is being harvested.

From what I see now I think that the disease can be cleaned out. It appears to me that the heavy losses of bees from spraying probably so weakened the colonies that European foul brood got a good start. No strong colonies seemed to be affected, and swarms hived on combs affected cleaned them out, and the disease did not reappear except in a mild degree, and the bees seemed to have the upper hand.

Dr. Phillips' letter to Editor Root, published in the editorial columns of August 15th GLEANINGS, page 615, has raised a storm in Western Colorado. Some said that probably all European foul brood is, any way, spray-poisoning. Others ventured the opinion that spray-poisoning could prob-

ably cause European foul brood. The sentiment seemed to be quite prevalent that, if what they had was European foul brood, it could be easily cured by moving out of the fruit district, which many had done and thus cured their trouble.

The statement of Dr. Phillips, that European foul brood is worse than a little surplus arsenate of lead, gives the impression that European foul brood must be very destructive, as half of some large apiaries were wiped out by spray-poisoning in five days, or what was alleged to be spray-poisoning.

I think that the beekeepers in the fruit districts will have to make arrangements to have the clover cut before spraying. I believe it a mistake to look for spray-poisoning in the brood; but all should keep on the lookout for European foul brood. From indications so far I think that spray-poisoning has been far more destructive than European foul brood; but the beekeeper who gets both along with American foul brood and a poor season has about met his Waterloo.

To sum up, I have been unable to find any evidences of European foul brood in the large beekeeping districts of western Colorado where spraying has been seriously complained of except in one very restricted district.

Moving the bees away from the orchards has been generally followed, and has proven successful. Fortunately none of the bees in the district where European foul brood is present have been moved this season.

The owner of one of the affected apiaries told me that he had noticed this trouble for several years, and I saw on one of his record-cards (these beekeepers all use records) these words: "Not foul brood, but what is it?" It did not answer the description of sac brood or American foul brood, and he had it under observation when I got there.

In another hive I found a beautiful sample of diseased comb of both American foul brood and European foul brood. All the brood was dead in either one or the other, in the proportion of about half and half. This colony had been treated for American foul brood; and some one who can, please tell me what a small colony in the fall will be worth after it has been treated for both.

Boulder, Col.

[While it is not our purpose at this time to take any hand in this controversy, we might add that we have had numerous reports of bees dying. They had visited clovers under trees that had been sprayed to kill the codling moth.—Ed.]

## COMBINATION HIVE-BOTTOM AND FEEDER

BY WILLIAM BEUCUS

For a long time I had wished for a feeder free from the objectionable features of the feeders now offered for sale by the supply houses. The Miller I tried; in fact, there are now in the attic some twenty of these which will never be used again. The objections to this feeder are: It is made of wood and gets leaky; it must have a super to go permanently with it, which is expensive, or a super must be emptied to be used, which requires expenditure of time and labor; and, when used in cool weather, a weak or only fairly strong colony will not go up after the feed.

The Boardman feeder is not large enough. The bees will not take the feed in cool weather; and every time it is used it must be hunted up and afterward put away again.

The Doolittle feeder is made of wood, and gets leaky. It is too small to be used for feeding for winter, and the hive must be opened to get the feed in. Lastly, like other feeders, it must be removed and stored away.

The Alexander feeder is too small, but it is in the right place. It is not, however, a permanent part of the hive, and it is made of wood. It will get leaky.

The pepper-box feeder—well, let's not mention it.

I desired to have a feeder which would fill certain requirements. It must not be made of wood, thus preventing leakage. It must be large enough to feed up for winter at a single feed, if necessary. It must be a permanent part of the hive—always in place. It must be placed where bees will most likely reach the feed.

An article in GLEANINGS by J. E. Hand, describing his large pan feeder, adopted from Quimby, gave me an idea which was

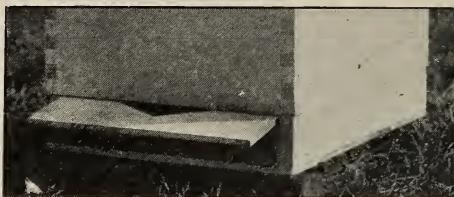


FIG. 1.—Beucus' feeder and hive-bottom with entrance-contracting block in place.

developed into the combination hive-bottom and feeder illustrated herewith.



FIG. 2.—The feeder-pan pulled out to show the float.

The bottom is a simple shallow chamber,  $\frac{3}{4}$  inches deep, with the front removable, as shown in Fig. 3. In Fig. 1 the notched adjustable entrance piece, with wire netting underneath, is shown in place. It is far ahead of the old-fashioned entrance-blocks, which are always getting lost.

In Fig. 2 is shown the feeder, a pan 14 x 17 inches, and also its float. The tin cover is used to bring a small quantity of feed up close to the frames for a very weak colony. To put feed into either the cover or the feeder it is not necessary to draw out the pan. Just insert a small hose at the entrance and pour the desired

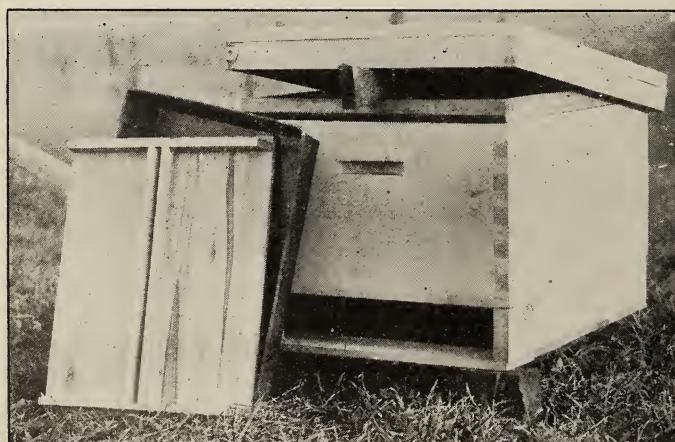


FIG. 3.—Feeder and float entirely removed, revealing the deep space under bottom-bars.

amount of feed into the funnel to which it is attached. Fig. 4 shows the float used as an alighting-board. It rests against the pan, which has been inverted, and now performs the function of the bottom racks used by Dr. Miller to prevent comb-building down from the bottom-bars. Notice there is abundant ventilation at the entrance. This year, some pans were inverted and shoved back until about two inches were left protruding in front for alighting-places. No comb was built down at the back. This was a poor season, however.

In Fig. 3 is shown the space which can be secured under the frames for wintering, if desired. This photo also shows the under side of the float and the pan.

In wintering it is not necessary to remove the pan, as there is a deep space between bottom-bars and float. Even with the little board in place in front, as in No. 1, but with the notched piece removed, there is no danger of the entrance becoming clogged with dead bees.

For the timid, this entrance-block is a boon. In moving bees to the cellar or in taking them out, just shove the entrance-board in. In carrying bees in, it is sometimes necessary, after the hive is in its place, to send a puff of smoke in as the board is being drawn out.

The pan in the feeder described above cost



FIG. 4.—Float used as an alighting-board.

me 12 ets. plus freight. It will hold about 25 pounds of feed.

Cadott, Wis.

[We believe the feeder described by our correspondent is a good one, especially for feeding a large quantity of syrup at a time. We have used the division-board feeders considerably; but because of the fact that it is necessary to remove one or two combs to make room for them we have been using the Boardman entrance feeder rather more this year. Fig. 5 shows two of our men filling



FIG. 5.—Filling Boardman entrance feeders.

the jars. All the empty jars are first set on top of the hives. One man with the can of feed passes along the row, filling the jars, while another follows, quickly adjusting the caps and placing the jars in place in the

blocks at the entrance. Even when robbing is bad, by working quickly we get into the yard and out again so quickly that robbers hardly know what we are doing. See editorial in the last issue.—ED.]

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## SYSTEM IN PACKING AND LABELING HONEY-PACKAGES

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BY R. F. HOLTERMANN

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For some years it has been my business to label and pack a good many glass packages of honey—last year over 30,000 jars. All that can be said of this is that it is a large number in a small way. Having to do a good deal of this work I have made a practice of trying to find out the most expeditious way of doing it.

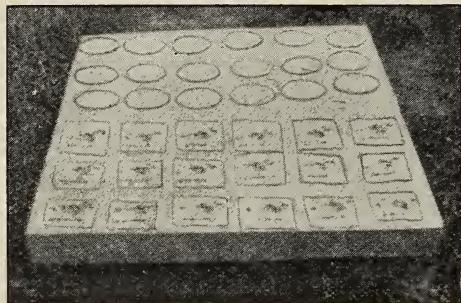
Our system is to use a metal board (we use the cover of a 12-frame hive) on which we put the paste with a flat fluid-brush. The paste needs to be just the proper consistency. We use a paste made by stirring

in that way receive their paste in just the right quantity. The paste must not be too thick and not too thin; it must also be put on the metal sheet in the right quantity, or the label will have too much paste or not enough. A little practice will soon make an intelligent person an expert in this matter.

The bottles are labeled before they are filled with honey, and the labels are picked from the pasted board as required. Three of us put up 87 cases of 24 each (2088 bottles), in one day, putting two labels on each bottle. We filled them with honey, putting screw caps on the glasses, and packing 2 dozen in a case. I did the filling, and the other two (one of them my younger son) did the labeling, putting on of screw caps and packing. The packing consisted of merely inserting the pasteboard partitions in the case and slipping in the jars.

Every thing was done according to a studied and planned system; every thing was at hand; and, so far as I could see, no unnecessary moves were made. The proper method is for No. 1 to label the bottles before they are filled; pass them to the right to No. 2, who fills them and passes them again to the right to No. 3, where the screw caps are put on and the bottles packed. System, and a right system, is a great thing in one's work. *Make no unnecessary moves.* How much energy is continually lost by making repeatedly unnecessary moves in work!

Brantford, Canada.



Applying paste to labels for honey-bottles by placing them on a metal hive-cover brushed with paste of the right consistency.

“steco” in boiling water. It is a preparation which looks something like starch, and no doubt it has a germicide in it to prevent mildewing of the paste under the label. The labels are laid upon the pasted surface, and

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## TREATMENT FOR FOUL BROOD SIMPLIFIED

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BY D. E. LHOMMEDIUS

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If one finds an occasional infected colony, all that is necessary to do is to shake the bees into a clean hive without even frames, leaving them there long enough to consume the honey that they carry with them. Then build them up at once by taking frames of brood, honey, and empty combs from strongest colonies in the yard, and every thing will go right along as though nothing had happened.

One of the secrets in having a shaken swarm stay lies in not moving or disturbing the hive in any way. Be careful also to see that the queen is not hurt, and that she goes into the hive, not under it. Furthermore, shake just enough honey from the combs on to the bees so that they will be extra well filled. This is important, as the bees are then more likely to stay and not swarm out. (Of course, this refers to shaking during a



A mail-carrier's apiary at Fall Creek, Wis. The bees are 50 feet from the road, and only 10 from the place where the owner hitches and unhitches every day, and yet there is never any trouble.

good honey-flow just before swarming time.

In shaking for the treatment of foul brood, as recommended above, the combs are all taken away, leaving the hive empty, while the bees use up what honey they have with them. Such combs as they start on the under side of the cover can be used for wax. Of the two colonies that I tried this treatment on last spring, the first was left thirty hours and the second forty-eight.

Scrape out the old hive that originally contained the diseased colony; scald it with

water from a teakettle; burn the brood, melt the honey, boiling it fifteen minutes, and throw the frames and wax into a No. 9 boiler and cook them until the wax is off. When the frames are thoroughly dried, new starters can be put in, which may be used for hiving a swarm later on.

The brood can be melted up for wax, if one prefers; but it should not be melted with the honey, as the honey, after it has been thoroughly boiled for fifteen minutes, can be fed back for brood-rearing.

Colo, Iowa.

## A MAIL-CARRIER WHO IS ALSO A BEEKEEPER

BY CARL BAUMBACH

I am a rural-mail carrier, and I keep 24 colonies of bees as a side line. Four years ago I bought a colony and the A B C and X Y Z of Bee Culture. That year I took 103 pounds of comb honey. The bees wintered finely. During that winter I bought "Fifty Years Among the Bees," by Dr. Miller; "Alexander's Writings on Practical Bee Culture," and "Advanced Bee Culture," by W. Z. Hutchinson. I also subscribed for GLEANINGS, and studied every spare hour. I finally changed to the production of extracted honey instead of comb.

This last spring I followed the Alexander plan (queen-excluder) with twenty colonies,

and the shaken-swarm plan with four, but found the latter plan to be far the better.

I transferred 24 very young larvæ from a select tested queen, that I bought, into prepared cell cups. I did not have any royal jelly; but the bees in the colony in which I placed them finished up nineteen fine cells.

The combs in the supers shown in the engraving were all drawn from foundation. I put the third super on July 7.

Last spring was wet and cold; but I had the hives wrapped in tar paper. This paper, after taking it off, I placed in front of the hive to keep the grass down. The plan



Interior of one of the straw skeps at the bee market at Veenendaal, Holland. Photographed by J. C. Bee Mason, London. Another picture of the bee market appears on our cover for this issue.

worked so well that I expect to take a long strip of paper next year and stretch it from one end of the row to the other to keep the grass down. The hives are on concrete

blocks. I use a Ditmer bottom with a two-inch opening in both sides. These are extra good for ventilation.

Fall Creek, Wis.

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## BEE-MARKET AT VEENENDAAL KLOMP, HOLLAND

BY HANS MATTHES

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The village of Veenendaal is situated in the center of Holland, in the so-called "Geldersche Valli," one of the most picturesque parts of the country. For hundreds of years this village has been noted for its market of swarms in straw skeps. Every year, on the second Tuesday of July, bee-farmers from all parts of the country come here, together with their wagons loaded with round skeps. Although the world over the modern wooden cases are in use, it is curious to note that, up to the present, the old models of round straw skeps are seen exclusively on the market at Veenendaal. The exhibition is held on a part of the heath, the so-called Nieuwe Weg, near an old church and a little tavern, the sign-board of which shows of old a round straw skep.

At this market the bee-farmers of the southern sandy parts of the country sell

their stocks that they have wintered over to those living on the clay grounds. The farmers, with a view to early profit, obtain early swarms by heavy feeding, which are put together into new round skeps. These swarms being rather small, and with small combs, are brought to the market, where they are put on rows of straw behind hedges of faggots, as is seen in the engravings. Some two or three thousand swarms, or even more, come yearly to this market.

The principal buyers are the bee-farmers of the Veluwe, living near buckwheat-fields and the heath. When the season is favorable, and the buckwheat gives honey (which it does not do always), the skeps may be filled in two or three weeks. In case they are entirely filled up with buckwheat honey they are emptied before the heath begins to flower. If not, the partly filled skeps are

brought to the heath in order to be completed with honey of the heath. The latter crop being over, the bees are generally killed, and

the bee-farmers await the next market to buy new swarms.

Breukelen, Holland.

## REQUEENING WITHOUT DEQUEENING

BY J. E. HAND

My thanks are due to Mr. Merwin, page 514, July 1, for a further explanation of his method of requeening without dequeening. Undoubtedly, caging the queen under the conditions he mentions will induce bees to finish grafted queen-cells; but how about the labor of hunting up the old queen? Will not such cells be built just as readily above a queen-excluder without caging the queen? and will not a young queen hatched above an excluder supersede the old queen upon the removal of the excluder? I cannot better express my views upon this subject than by quoting the following sentences from G. M. Doolittle's book on queen-rearing, page 158. Here is the quotation: "If you wish to supersede a any queen in your yard on account of old age or for any other purpose, you have only to put on an upper story with a queen-excluding honey-board under it; place a frame of brood with a queen-cell upon it in this upper story; and after the young queen has hatched, withdraw the queen-excluder, and your old queen is superseded without your even having to find her," etc.

Again on page 96 in the same book Mr. Doolittle says, in part, "This is a singular freak, and one which I know not how to account for; but I do know that so far every virgin queen that has succeeded in getting from the upper story into the lower one has superseded the queen reigning there, whether that queen was old or young." While

these sentences were written a quarter of a century ago, they are true to-day, and will remain true to the end of time, for the instinct of bees cannot change. I wish to emphasize this trait in bee nature, because I regard it as an important factor in the economical solution of two important problems, namely, "queening without dequeening," and "swarm prevention." Concerning the former problem, however, little more can be said, for the virgin-queen method is undoubtedly the surest and most economical method known.



Lifting a comb from a frame hive at the bee market. Photographed by J. C. Bee Mason, London.

The object of requeening is a threefold one, namely, to introduce new blood and to have always a vigorous young queen in every colony; and last, but not least, to prevent swarming, while the object of doing it automatically, as just described, is to eliminate the labor of hunting queens in hives overflowing with bees. Furthermore, by requeening at the close of the season, as advocated by Mr. Merwin, the non-swarming feature is lost, for the principle is not effective except with young queens just beginning to lay, or with virgins. Since there is no safe method of requeening with laying queens without dequeening, it is advisable to rear queen-cells from a select breeder, and requeen by the virgin-queen method.

#### QUEENING FOR SWARM PREVENTION.

In GLEANINGS, June 15, 1913, Dr. C. C. Miller is responsible for the statement that, if a colony that has prepared to swarm is made queenless for ten days, and given a young laying queen at the end of that period, after removing queen-cells at the beginning and close of that period, that colony will be a non-swammer for that season. I quote these two eminent authorities because I have combined the Doolittle method of supersEDURE with Dr. Miller's method of swarm prevention by dequeening, thereby forming a combination of requeening and swarm prevention that eliminates the labor of requeening, removing queen-cells, etc. Here is the method: Remove all brood-combs containing queen-cells from the colony that is preparing to swarm, and substi-

tute dummies. Place the combs having queen-cells in a separate hive close beside the colony, without shaking the combs. When the first young queen hatches, remove the remaining cells, also any that may be in the colony, and carefully replace the combs without spreading them, or the bees including the young queen may be shaken from the combs and run in followed by a few puffs of smoke.

The reigning queen will be executed without parley or delay. This stops egg-laying for approximately ten days without rendering the colony queenless. Meantime the young queen will have begun to lay, and that colony is a non-swammer, and will work with a vim equal to a newly hived swarm. It is thus that colonies are requeened and swarming prevented with little manipulation, and without seeing either queen except the dead one that will be dragged out. With my limited experience with this method, I am not sure that it is necessary to wait until queen-cells are started; if not, the method can be further simplified. We had a colony the present season, with the swarming mania so highly developed that they absolutely refused to yield to any treatment. We took away all their brood and substituted sheets of foundation, and still they swarmed with an egg in a queen-cell; but the virgin-queen method settled the fracas, and they rolled up a fine crop of surplus honey. While this method gives promise of good results it will require another season to develop the principle fully.

Birmingham, Ohio.

### SOME COMMENTS ON RECENT ARTICLES ON WINTERING

R. F. HOLTERMANN

The September 1st number contains some very interesting information in connection with the wintering of bees. The article by J. E. Hand has some points which deserve a little further attention. His remarks in connection with the tendency to winter bees outdoors are perfectly correct. That it is a movement in the right direction I also believe, providing proper winter stores are provided. When we come to the question of the best winter stores, Mr. Hand and I are as far apart as it is possible for us to be. He writes, "Bees wintered out in the open in properly protected hives with good stores of pure honey (not sugar syrup), will usually be healthy, strong, and vigorous in spring."

I feel sure that the very best winter stores obtainable is sugar syrup. Clover honey

may be its equal, but nothing is its superior. So strongly do I feel about this that at this date of writing, Sept. 22, I am withholding winter feeding because I would sooner have the bees consume natural stores now instead of using, during the autumn and perhaps very early winter, the sugar-syrup stores.

In every case where I have had heavy winter losses I have, to my satisfaction, been able to trace that loss back to the use of inferior natural stores as food by the bees. What makes natural stores unsafe, where the bees are confined to the hive for months at a time, is the uncertainty of their composition. What makes artificial winter stores better is the certainty and uniformity of these stores if the best of granulated sugar is used.

## VITALITY.

Mr. Hand states, "I am a firm believer in the immunity from such diseases as European foul brood, paralysis, spring dwindling, dysentery, and kindred diseases, by maintaining sanitary wintering conditions with respect to pure food in abundance, and suitable protection out in the open."

While there undoubtedly is much in this I know that American foul brood may be found in colonies of bees in the very best of condition so far as outward evidence goes; and I venture to say that foul-broody honey fed to colonies of varying strength will show no difference in results. Now, I am not going to deny that, to a certain extent, there may be a constitutional difference in bees which makes them more or less immune to germs of disease; but this is not designated, or, rather, controlled by stores, wintering, etc.

## SIZE OF BROOD-CHAMBER.

Mr. Hand states, "Eight frames is the maximum capacity for best results, and six is nearer correct."

If a twelve-frame colony of bees has been able to cover the combs of a hive having three or four upper stories—yes, I will say two upper stories—eight combs will not be sufficient for their late autumn and winter requirements; yet I would say the surest and best results are to be obtained by contracting the brood-chamber so the bees will cover their winter stores and the combs of the hive.

## UPWARD VENTILATION AND HIVES.

When we touch upon the question of what the instinct of the bee is, we must remember that the honeybee is not a native of northern countries, and the instinct of propolizing the hive may be more to keep moisture out than for any other purpose, and that in any case instinct is of value only in so far as it is in natural environments.

As to the hive being suitable for both summer and winter, in my estimation the requirements would be of such a nature that it would add too much to the cost and weight of the hive.

## CELLAR WINTERING.

While largely agreeing with Mr. Hand as to the inadvisability of cellar wintering, we must remember that, to keep bees where there is a "compulsory retention of fecal matter during long confinement," is a "violation of nature's laws," be that outside or inside. He states that "bees love to revel in God's pure air and bright sunshine, hence an enforced confinement for four months in total darkness . . . is not conducive to health."

Bees do come out to pure air and bright sunshine; but give them a place secluded with a small entrance, or ask them to found a home in the open, even if not exposed to rain, and we pretty well know what they will choose.

## FEEDING SUGAR SYRUP.

Let us take a colony which has come through a season where nectar was scarce, and the bees have gathered insufficient stores for winter, and they ripen sugar syrup instead of honey, why has that colony suffered any more from storing syrup? I do not think it has. The great thing is to give the feed so that it will all be in the comb in 24 hours. Give it as Mr. Hand states, in the proportion of two of sugar to one of water (I would even say  $2\frac{1}{4}$  of sugar to one of water). Feed it when the weather is cool. Feeding honey excites bees more than feeding sugar syrup, and therefore there should be less waste in feeding sugar syrup. Sugar syrup should be better for winter, and honey better for spring. Last spring I was surprised to find how few colonies reared brood before the bees began to gather pollen. The most of the colonies had not been fed any sugar syrup the previous fall, and I had introduced 400 Italian queens the previous fall. There undoubtedly is something about honey which excites and stimulates the bees more than syrup. If this is not believed, try it in robbing time; try it when you feed the bees; try it to induce brood-rearing, and you will be satisfied. This is one reason why I like sugar syrup as a winter food.

Brantford, Canada.

## ALFALFA-GROWING IN THREE STATES

BY O. G. ALLEN

Some time ago there was a request for information in reference to the time to cut alfalfa. I have had 15 years' experience in the alfalfa of eastern Oregon, Washington, and Idaho.

The proper time to cut the alfalfa in the

West is when the shoots of the following crop are low enough to be missed by the sickle. I paid no attention to the stage of bloom; but ordinarily the first crop should be cut when one-eighth in bloom. The second when about half in bloom; the third



Portable extracting-house used by A. G. Anderson, Beaver, Utah.

crop should be let go until all is in bloom. If the third crop is cut too soon it will be washy, and not good hay. From tests I have found that the hay begins to lose in feeding and fattening properties after it has passed the half-bloom stage.

Another great mistake alfalfa-raisers make is to let their hay get too dry before raking and stacking, thereby losing a large per cent of the leaves, which contain the large per cent of food value. I do not know it all when it comes to the care of alfalfa; but I learned of a good many instances where much money and time could have been saved in caring for the crop.

When it comes to stacking hay, the one who uses a wagon is much behind the times.

I use frames and nets with a swinging-arm derrick which put the hay up in better shape than any rig I have ever used. By using buck-rakes and a Jackson or Fleming stacker, you can put up more hay with the same number of men; but the quality of the hay will be in favor of the frame and nets. The frame is built just like a barn-door, of 1 x 6 boards 14 or 16 ft. long and 8 ft. wide. I crossed the boards at each end with 2x4's, and 2 1 x 6 through the cleats. At each end is a staff to bolt the net rings—a cable and ring to hitch to completes the frame. One will readily see that the frame will ride on top of the stubble, and go right across ditches without any trouble whatever.

Pendleton, Oregon.

## A PORTABLE EXTRACTING-OUTFIT

BY A. G. ANDERSON

The accompanying engraving shows my portable extracting-outfit. The honey-house, as shown, is on a wagon with springs to make the riding easy. The room is 8 x 12 feet, inside measurement, which gives plenty of space for extracting. I keep a two-ton

honey-tank at each yard, which is stationary. The house remains on the wagon all the time during the honey season (this picture was taken when we were extracting for the public during our "home-coming week").

On the wagon is my son Claud, who is now one of my general hands. The one at the left of those standing is Charlie Keil, my helper at general work; next, myself; and then Otto Baty from Highgrove, Cal., my foreman, with my little daughter of six, Bonny Anderson, between. She always likes to be with me when I am among the bees.

The other picture shows Miss Novella Turnbow, my sister-in-law, and my daughter, Geneva, who have done all of my uncapping for a number of years. I don't believe there are two men in the West who can uncaps more honey in a day nor keep a neater honey-house. They frequently uncaps two tons of honey in a day.

Beaver, Utah.

## CUCUMBER-SPRAYING THAT IS HARMLESS TO BEES

BY STEVEN T. BYINGTON

One hears more about the evils of reckless spraying than about the methods by which the necessary spraying can be done so as to be harmless. Cucumbers, and many sorts of cantaloupe, need to be sprayed with a copper spray for protection against disease. They do not, in my garden at least, need any arsenical spray for protection against biting insects. They sometimes (not every year) need a contact insecticide, such as soap suds, to kill off the plant-lice; but that is not dangerous to any bees except those that are on the vines at the very moment of spraying. I do not know if it is dangerous, even to those. But it is very common to spray them with "pyrox," a mixture of arsenical and copper spray, because the arsenic helps the copper to stick to the leaves, and because pyrox is skillfully made to be as wholesome as possible for the vine, and because it is considered good policy to do whatever will kill bugs at any time. I notice just now that an agricultural paper which always recommends the liberal use of pyrox is complaining that this year there were so few bees that the cucumber crop was short.

This season I have been trying the experiment of spraying late in the evening with the ammoniacal copper-carbonate solution. It has seemed to work well except on some vines which, in my judgment, had the disease from the start because they were not sprayed soon enough. (You know spraying can never cure this disease—only prevent it.) I doubt if this solution, in the very small quantity that is used, would kill a bee or larva, even if nectar were taken from a freshly sprayed flower; and by spraying late at night I feel sure that by morning the copper will all be beyond a bee's reach, even in the few flowers that have not wilted during the night. It will, I am sure, dry on to the leaves firmly, even while the dew is falling, so long as it is not rained on in the first half-hour: hence it can be used at right and in other non-drying weather. And it is so cleanly that washing it out of a

brass sprayer after using is a mere matter of form. Some say it burns the leaves. Perhaps my using it in the dew protects me against that—at least I have no such complaint to make.

To make this solution, get from the druggist a pint or pound of extra-strong ammonia (such as you cannot buy at the grocery), in a glass-stoppered bottle marked "26° B," and an ounce and three-quarters



Misses Novella Turnbow and Geneva Anderson, who frequently uncaps two tons of honey in a day.

of carbonate of copper. This 26° Baumé ammonia will squirt when the glass stopper is first taken out; therefore do not have your eye over it or you will wish you were only stung up by bees instead. Probably, to get the stopper out, you will have to take a twist of paper or cloth wet in hot water and hold it around the neck of the bottle a minute or so, which will doubtless make the squirt still more certain to come. When you get it open, put in the copper and stir with a wire or stick. It will dissolve as easily as salt in water. Use one part of this solution to 270 of water. If you work on a very small scale, use two level teaspoonfuls to a quart, or two tablespoonfuls to a gallon. The stock solution will keep perfectly if you keep it in a cool place in the glass-stoppered bottle in which the ammonia was bought. Don't be scared by reading that it won't keep.

When one needs to use an arsenical spray

on plants which he does not need to have the bees visiting at present, as in the case of those Colorado orchardists who sprayed the trees under which the clover was growing, I think he ought to mix with the spray enough tobacco tea (or any strong-smelling nicotine insecticide) to make the sprayed foliage smell of tobacco till the sprayed flowers have had time to fade. That will warn off the bees, or I am mistaken. And at the same time it will, if strong enough, kill the plant-lice on the sprayed trees.

I was surprised to read about bees gathering bright-green pollen from swamp-milkweed. I thought milkweed pollen grew in such shape as not to be useful to bees. Is it certain that it was milkweed and not some other milky-juiced plant such as dogbane? One sort of dogbane is called "honeysuckle" according to the botany.

Ballard Vale, Mass.

## NOTES FROM GERMANY

### Imbedding Foundation and Fastening it in Frames

BY J. E. HEBERLE, B. S.

The article by H. H. Root in the Nov. 15th issue, page 799, is very interesting. The illustrations are so clear, that a bee-keeper who has had only a few lessons in English may easily understand it.

I use no grooves with wedges to hold the foundation. I solder it on the top-bar with melted wax. If the wax is warm enough it will hold as much weight as the foundation will stand, but will not stick well if it is too cool. It should be just warm enough so that it won't melt the foundation.

I use a board about  $\frac{1}{4}$  inch smaller than the inside of the frame, and thick enough to hold the foundation in the middle of the top-bar. On the two long sides of the board is nailed a thin lath a little longer than the frame, and extending about half an inch over the sides. The foundation is laid on the board and the wired frame upon it, care being taken that the sheet touch the top-bar the entire length. Board and frame are firmly held in the left hand with the top-bar down, and so inclined that the melted wax poured in the upper corner will run down rapidly. It is better not to pour too much wax on one place as there is danger of the foundation melting at that point. Keep the wax constantly pouring out in a thin stream. We have a handy alcohol-lamp, with a spoon that can be removed, which is used to melt and pour the wax on the top-bar.

When the spoon is removed, the wire-imbedder may be heated on the flame.

Alcohol for industrial purposes is very cheap—about 35 cts. a gallon—while that for consumption costs about \$2.70 per gallon. These are retail prices. The strength of each is about 96 per cent. The only difference is that, to the alcohol for burning, etc., a small quantity of piridine is added to make it unfit for consumption. It makes a good heat, and is clean. Alcohol is used for burning in the kitchen stove during the summer months.

After one side of the foundation is fastened, the board is removed and the frame is held in the left hand in such a position that with the right hand the melted wax can be poured on as before. The lamp is allowed to burn, and the flame is regulated to suit. Lamp and spoon are used as one piece. The spoon is removed when wiring foundation, and the imbedder put in its place. The one I use has V-shaped grooves in the teeth so the wheel can't slip so readily. Between the handle and the center of the wheel, there is an extra-heavy metal part that helps to keep the teeth at the desired temperature.

#### WATER FOR BEES.

German bee-journals mention the necessity of providing water for bees where

nature does not supply it near the apiary. A dish with something in it, such as small laths, excelsior, straw, etc., to prevent the bees from drowning, will suffice. A couple of barrels with arrangements for continual drip (a spigot (cock) or siphon) would be convenient for large apiaries such as you have in America. The barrels should stand on a foundation one and a half or two feet high. The drip should fall on a slanting board, with rills, or covered with gunny-sacks, etc.

When the bees have young brood they need much water. A large force of bees is needed in the apiary to carry water. In early spring the weather often changes suddenly and many water-carriers cannot return if they have to go a considerable distance. We often have very bad weather for several days in succession. It is not only the loss when bees are more valuable than at any other time, but the extra work saved to the bees would pay for the trouble of providing water in one or more places in the apiary.

Water at about 70 to 80 degrees F. is recommended. A beekeeper can readily make an arrangement for warming it. A kerosene-lamp will supply the heat very cheaply. If desired I will describe in detail one I have made.

#### OBSERVATION STATIONS.

In many of the provinces observation stations have been established. A hive on scales is weighed once or twice daily during a part of the year. The number of days and hours during which the bees fly, the amount of rainfall, prevailing winds, etc., are noted. These observations are sent monthly to the chief of observers, who tabulates the results and publishes them with comments. Bavaria has 31 such volunteer observers in the various parts of the kingdom. Switzerland has 39. The chief, Mr. Juestrich, in his annual report in the *Schweizerische Bienenzzeitung* states that the 39 stations have 52 hives on scales, 44 of these having frames in an upright position, and 8 in the same way that you have yours. The top-bar is longer than the ends.

The average monthly consumption per colony was, November, 710 gr., 1.6 lbs.; December, 688 gr., 1.5 lbs.; January, 794 gr., 1 $\frac{3}{4}$  lbs. The average consumption in ten years was, for November, 741 gr.; December, 888 gr.; January, 956 gr. In Bavaria the average is given for 1911; November, 595 gr.; December, 446 gr.; in 1913, November, 371 gr.; December, 691 gr.

In April the brood was measured, 14 colonies showing an average of 34 cm<sup>2</sup>, or about 544 square inches per colony.

Markt Oberdorf, Bavaria, March 16.

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## HYBRIDS VS. PURE ITALIANS FOR HONEY

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BY DR. C. C. MILLER

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*Dr. C. C. Miller:*—I certainly agree with all you have written in favor of the black and hybrid race of bees being superior for comb honey; and with my experience I am unable to see why you have changed over to the Italians. Some of the poor seasons the blacks have more than doubled in the amount of comb honey produced. I have been a close observer of the workings of the two races, and in every instance the dark race leads the yellow in the production of comb honey. In working for extracted honey I do not see any difference in the average. With this experience I am still partial to the dark race; but as the whole fraternity seem to differ I am still trying to secure a race or strain of Italians that will do what is claimed for them, or at least as well as the blacks. You seem to be satisfied with your present line of Italian stock. The question is, where did you secure the queens that do so well for you at this time? I desire to purchase a few queens this season, and am at a loss to know where to get them. All queens that I have purchased of late years have proven to be very much inferior to what I already had, and in some instances *very inferior*. Some that I have received produced bees that are the most determined robbers that ever inhabited a hive. Others will do nothing in comb honey. Can you give me the address of one or more breeders whose stock you know is good?

S. COULTHARD.

Thompsonville, Mich., April 17.

It is not the easiest thing to make entirely clear my view with regard to blacks, Italians, and their crosses. It is true that I have had hybrids which did so well that Italians I obtained did not equal them in storing. From this some have concluded that I believe black blood better than Italian. That inference is warranted only on the ground that *the whole* of what I said was not taken into consideration. Let me try to make the matter clear.

The hybrids I had, which were better than Italians, had been bred up through years of careful selection. As I have said more than once, if I had taken the same pains in selecting from pure Italian stock, it is entirely possible that I might have had Italians still better than my hybrids. It is well known that a first cross is likely to have more vigor than either parent of pure blood. So I bred from my best stores, which were hybrids. It is also known (although I didn't know it in my early beekeeping days) that following up with crosses is not likely to result so

well as to stick to pure blood with its more fixed character.

So I don't think it's fair to compare Italians with hybrids that I had polished up to shine their brightest. A better way is to compare pure Italians with pure blacks. It is not an easy thing to do that now, at least for me, for I have not seen a colony of pure blacks in many a year. But years ago there was no difficulty on that score. I began with blacks of the purest character, and there was no danger of contamination, for only blacks surrounded me. My first Italian stock was from Mrs. Ellen S. Tupper, Washington, Iowa, afterward for a time editress of *The American Bee Journal*. Afterward I got Italian colonies from Adam Grimm, Jefferson, Wis., later known as the man who started a bank with his bee-money. That gave me a chance to compare blacks with Italians. The Italians were away and away ahead. That's one of the things I know, and know for certain.

Having introduced Italian blood, in my ignorance I did what many another is doing to-day—left the bees to their own devices in the matter of breeding. I did, however, get an imported queen from Italy now and then, and afterward began building up the strain of hybrids that did so well.

Now please let me get myself on record straight. I do *not* believe blacks are better than hybrids, and for permanent results I doubt the wisdom of getting in the least taint of black blood. If I had it to do over again (and this is the part of what I have said that some overlook) I would stick to the purest Italian blood every time.

But, having established a strain that was ahead of any thing else I knew of, why did

I make so radical a change as to weed out all the black blood, or nearly all? Just one thing made me change. In making selection for breeding I had ignored every thing but the one factor—the gift of storing—and along with that I had developed a strain so full of viciousness that they seemed to conclude that they could run the place alone, and had decided that they would run off the place every thing not provided with six legs. My assistant protested bitterly that, after having labored for years to build up a strain that would do such good work, I should throw it all away and begin with—I didn't know what. But I said I'd rather have less honey and not be obliged to move. So for some years the weeding process has been going on, and now I have mostly Italians.

I got stock from The A. I. Root Co., from Doolittle, and from Italy, and I suppose the stock I now have is a blend. I cannot answer the question where to get best Italians. For all I know there are many who have excellent stock.

I may be asked how my present compares with my previous stock. I don't know. It's hard to make a comparison between two things several miles or several years apart. But I've kept up breeding from the best, and I think I have some pretty good workers. And it may be well to say that last year I seemed to get best results from the yellower bees. But it isn't certain that will be so next year.

Just one thing I want to urge. If you are not satisfied with your stock, get the best you can, and count that only a beginning; the important thing is to continue persistently *breeding from the best*.

Marengo, Ill.

## ANOTHER GREAT SWAMP BEE PASTURE

BY G. W. HAINES

The editorial, page 570, Aug. 1, on the big swamp or marsh land gives a good description of a large swamp near my apiary, only it is ten miles long and from two to five miles wide. It is so marshy for a distance of eight miles that a team cannot cross except in the winter on the ice. A large creek runs through the center the whole length, and this affords good fishing. In early spring it overflows and makes a lake as the water goes down. It is great bee pasture. In early spring many wild flowers and acres of willow start the bees breeding in fine shape. During clover bloom they do not seem to work that way. After clover bloom there is a lull of bees that way until frost cuts off every thing.

You give a good description of all honey-plants found here; but you do not brag enough of the button-bush, as you call it. We call it here "button-ball," as the bloom and seed are as round as a ball. It comes in bloom in August, with buckwheat. The bees start for the buckwheat-fields in all directions in early morning. At about 11 o'clock they usually leave the buckwheat and start for the big swamp. On the button-ball they seem to work all day. It is a sight to see the whole apiary of 225 colonies working in one direction.

A man stopped one day and told me all the bees I had were running away down in the big swamp. On several occasions I have seen bees that I was satisfied were mine

working on the button-ball seven miles from home, with many square miles of fine bloom near by. This honey goes in with the buckwheat, and gives it a fine flavor. I believe bees go further for honey than many think, with many flowers nearer by.

I am located on the west of this swamp,

E. M. Lawrence is on the north, and Percy Orton on the East, at Northampton, each with a large apiary, and I am sure they will both back up all you say, and more too, about swamp land.

Mayfield, Mass.

## MOODS OF BEES VARY

BY J. D. FOOSHE

I note that the smoke method of introducing queens is not always successful. I have read with interest the many claims for this method. I am not surprised to see that, after having been tested a year or more, it is not always successful. I have no doubt that veteran beekeepers have tried the same plan oftentimes before, but decided that it was not always successful.

Bees are the most erratic little creatures in their temperament of any thing I have ever had any thing to do with. When I worked with bees regularly and reared queens daily, and was constantly changing queens or introducing queens that came through the mail, I had some notable experiences. In the first place, bees are so susceptible to climatic influences which create abnormal conditions inside their hive that they are seldom in the same mood, so to speak. To-day you may raise the top of a hive and pull out all the frames, and not use a particle of smoke; but to-morrow, look out. There might have been an east wind or a slight sprinkle of rain during the night, and the same colony that let you handle them the day before without smoke will hardly let you enter the next day without drastic measures; so, oftentimes, this condition prevails at the time a queen is to be introduced. If in a normal condition, and honey coming in, almost any of the

tried methods of introducing will succeed; but if their temperament has been affected, not so.

I have oftentimes used smoke successfully; but having frequently failed with it I stick to the cage plan.

Virgin queens several days old can often be successfully introduced by any of the common plans, provided conditions are right in the hive. I remember away back into the 70's I received by mail a queen that I prized very highly. I introduced her to a strong colony that I knew positively to be queenless, and in a couple of days I was investigating, and found my queen in a ball of bees. I smoked them and released her and put her back in the cage, and this process of recaging and balling went on for a week, and I deliberately got some chloroform and put them all apparently dead on the bottom-board, and turned the queen loose; and when they awoke from their stupor they seemed to be glad to accept her royalty, and she was soon laying. Any queen that has ever been baled, whether laying or virgin, is harder to introduce than if never antagonized, even though she be changed to another queenless colony.

In all my experience I don't know of any thing that is so changeable in physical condition as the bee.

Augusta, Ga.

## LEARNED BY EXPERIENCE

BY E. S. MILLER

In regard to the metal-top hive-covers, I have tried many kinds and find that with rims  $\frac{5}{8}$  inch thick they are by far the best cover. The metal should be well painted with white lead and oil, otherwise they will rust in a few years.

### METAL-BOUND SUPER-COVERS Warp.

The metal-bound super-covers are less satisfactory, for the reason that they warp; the changing humidity causes the cracks between the boards to widen, and,

in prying off the cover, the metal becomes bent, causing the boards to curl up at the edges. I have used them several years, and find that bee-escape boards used for this purpose are much superior. The opening, which may be covered ordinarily with a piece of section, is also useful in many ways. When feeding in late fall or early spring it is not necessary to loosen the whole cover, thus exposing the bees to drafts. In hot weather the openings may be used for ventilation; and in taking off

comb honey the tins can easily be removed without disturbing the bees.

A pretty good feeder can be made by inverting a friction top pail over a pie-tin. Fill the pail, and cover it with a piece of cheese-cloth and the tin before inverting.

#### IMPORTANCE OF HEATING AND STRAINING HONEY.

Too many bee-men practice drawing honey directly from the extractor into cans to be sold to the consumer, without heating or passing through a settling-tank. A little foam or a dead bee now and then will frighten away many a good customer.

I had an oven made somewhat similar to that described by Mr. Pouder in GLEANINGS about two years ago, for liquefying honey in 60-lb. cans. Two oven gas-burners were installed; but I find one to be sufficient, and it must be turned very low. I find, also, that if the cans are inverted the honey runs out while still partly granulated, and must be subjected to further heating if it is to be strained or passed through the settling-tank. If the cans are not inverted, the honey at the top of the can becomes too hot, while at the bottom it remains unmelted for a long time.

Twelve hours or more are required to liquefy six 60-lb. cans of candied honey in this way when the thermometer at the top registers 160 degrees.

I figure that it is worth about three cents per pound to furnish pails, shipping-cases, and labor in liquefying and putting up

honey in five and ten pound pails. If I am right, then when candied honey is selling for nine cents per pound in five-gallon cans, liquid honey should be worth about twelve cents when in pails ready for the consumer.

It seems that around Chicago, at least, there are quite a number of canvassers who have discovered that there is a profit in buying extracted honey at wholesale prices or less, and selling at twenty cents or more per pound to the consumer. In a way these people are doing good by creating a market and in bringing a wholesome food to people, many of whom never before tasted honey; and yet it does not seem quite the proper thing for them to receive more for selling than the beekeeper gets for producing.

The next step for the producer will be to induce retail grocers to handle honey in pails. Their margin of profits should be considerably less. I have tried selling in this way in two or three towns, and thus far it has proved successful.

#### MOISTURE PASSING THROUGH THE HIVE WALL.

It is capillary action that causes the passage of moisture through the sides of an unpainted hive. Of course, no appreciable amount of impure air will pass out that way. But how much moisture under ordinary conditions? Will some one determine this?

Valparaiso, Ind.

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#### NOTES FROM HOOSIERDOM

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BY S. H. BURTON

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Three supers full of paper white honey in 27 days from bluevine, and the bees loafing for want of space, is the record for one colony in the White River bottom.

We find that introducing queens by the smoke method is successful if *plenty of smoke is used*. Three attempts at introducing queens by running them in at the entrance with a "few puffs of smoke" resulted in a failure in each instance. The bees promptly bailed the queen. We rescued the queens, fired up the smoker, and gave it to them from above strong enough to send them scurrying out at the entrance, and boiling over the tops of the frames. The queens were again released, cover replaced, and some more smoke driven in at the entrance. An examination 24 hours later proved that "all was quiet along the Potomac."

Cool nights and cloudy days have pre-

vailed during the last fortnight, and bees are not finishing up all sections in top super. We shall discontinue tiering up all but the strongest colonies.

The fall flow from goldenrod and white aster opened up with a rush Sept. 15. Bees are crowding in the supers, and we expect to take off some golden honey that will taste fine on hot biscuits. In mowing weeds along the fence and in the pastures I always instruct my men to spare the goldenrod. By practicing this method for several years I have a border of goldenrod around my farm which not only looks attractive but furnishes good bee pasture. This morning I counted nine bees on a single clump gathering in the nectar.

A good local demand prevails for new honey, and we are selling more to private consumers than ever before. The high price of sugar has stimulated the demand for

honey, and we anticipate no trouble in disposing of our entire crop locally. Talk honey to your oanker, your baker, your candlestick maker; tell them what a fine product you are harvesting; quote them the same price that you would quote your jobber or wholesaler, and see how quick you can move the crop. We carry a small advertisement in the local dailies which reads, "From producer to consumer. Save

the middleman's profit," and quote it at 16 2-3 cts. per section, or six sections for \$1.00. We have all the orders we can fill. Honey retails at our local groceries from 20 to 23 cts. per section; but the grocer or dealer will not pay the producer any such price. Why not give the consumer the wholesale price and stimulate the demand?

Washington, Ind., Sept. 2.

## THE SIZE OF THE BROOD-CHAMBER REQUIRED DEPENDS ON THE LOCALITY

### The Eight-frame Brood-chamber Recommended with the Addition of a Half-depth Super when the Single-story is Too Small

BY J. J. WILDER

This great question that is being so much agitated is already settled by many of us—we have what we want, and we know it to be the best for us. But there are many coming into our ranks who do not know what to use, and there are also some who have already entered who are not pleased with the size of brood-chambers they have adopted, or do not know what size to adopt, and they are depending on us to enlighten them on this subject.

There has been so much said about the larger brood-chambers, the ten and twelve frame size, that beekeepers who have the eight-frame size have begun to believe that they haven't the thing; and the question is, "Shall I change?"

#### WHATEVER IS USED FOR A BROOD-CHAMBER MUST BE WELL OCCUPIED.

Let me state here that whatever is used for a brood-chamber must be well occupied by the queen during the honey-flow for best results in the supers above; for if there is a comb or more on either side of the brood-nest that the queen does not occupy, the result is poorer work in the supers. So the brood-chamber must be the right size. Better have it a little too small than too large.

The ideal brood-chamber, as I see it, is the regular eight-frame full depth body. Now, in sections where in certain seasons of the year brood-rearing gets at such a pitch that additional room is needed just for a short time, a shallow extracting-super of the regular size containing ready-built combs can be placed on top which will catch the over-production of brood; and as soon as well occupied it can be placed under the regular brood-body and storing room added. The result will be a greater

harvest, especially in comb-honey production, than with any other arrangement for a brood-nest.

What about this super used as additional brood-chamber? The queen will occupy this more or less during the time she is laying most eggs; but as soon as this is over she ceases to occupy it, and confines herself to the regular brood-chamber, and the bees will store but little honey, if any, in it where it is, if they have plenty of storing room above; and if there is any honey in it, it is consumed or carried above long before the bees are ready to be put in wintering quarters. It can be removed at the close of the season, or removed from the bottom and placed on top of the regular brood-nest as soon as the crop of honey is removed. Should there be a light flow toward the end of the season, the bees will store some honey there for winter use.

There is no danger of swarming as long as this super of combs is just above the brood-nest; and if placed below just as soon as well occupied, and the whole hive elevated from the bottom-board by means of two  $\frac{7}{8}$ -square strips cut as long as the hive is long, placed on either side, you have as near a non-swarming colony as can be made by arrangement. Besides, if you want to examine the brood-nest, all that is necessary is to lift the body up a little from the super, and a glance up and down will reveal the conditions. By this plan the lightning operator can care for hundreds of colonies, so far as swarming is concerned.

If increase is desired, the arrangement is just the thing. As soon as most of the brood in the shallow combs is sealed, see that the queen is not on these combs, and then set the super off on the new stand, and

give it a queen-cell. Or, let the bees build cells and raise a queen if the weather is warm.

I am speaking from the standpoint of a Southern apiarist, and for the South. I have had almost unlimited experience, having bees scattered along in different sections for over 200 miles, producing and putting on the market each year over 15 different kinds or flavors of honey. So I have been in almost all kinds of locations.

I have 15 apiaries in sections where we need additional room to the regular eight-frame hive-body for a brood-nest. I also have 20 apiaries where the eight-frame body by itself is large enough for a brood-chamber, and 20 more where the eight-frame body is too large for a brood-chamber at any time of the year. The result is, I am having to use only the shallow super for the regular brood-chamber, because I can produce a third more honey by doing so. The full-depth size is too much of a storing place to get much honey in the comb-honey supers. There is one bad feature about these single shallow supers as brood-nests; and that is, the bees store all honey in the supers above; and when they are removed there is sometimes a shortage of winter stores. However, this shortage is supplied with shallow frames of honey from some colonies that we have to store in them to be used for that purpose.

It may startle some of my readers to know that such conditions exist here—that a single shallow extracting-super body is sufficiently large for a brood-chamber in the average location in the great Southeast.

I have visited a great number of apiaries

in the extreme portions of our country, the bees having been brought there from the North by Northern people in large hives. Lifting out the outside combs in these large brood-chambers, I find the comb contains no honey, and that they never have been occupied by the queen. In most cases the moths have ruined them. There is usually a small brood-nest right in the middle, the bees, perhaps, storing just above it, while all around is unoccupied comb being ruined by moths. It is needless to state that the industry has gone down under such conditions, when, if the proper size of brood-chambers had been used, it would have been different.

Cordele, Ga.

[Our correspondent, in this article, virtually takes the position that the size of the brood-nest depends upon the locality. Supposing, for the sake of argument, that the 15 apiaries mentioned could suddenly occupy either of the other two localities, would the eight-frame 1½-story brood-chamber, with the same colonies, soon be too large? With the same management and the same prolific queens, it is indeed "startling" that there should be such a difference in the size of the brood-nests as to require almost three times as large a brood-chamber in the first locality mentioned by our correspondent as in the last locality. If Mr. Dadant, with his extra deep hives, and Mr. Holtermann, with his twelve-frame hives, were to move their bees into this last locality, would they be obliged to adopt a single eight-frame half-depth super for a brood-chamber in order to succeed?—Ed.]

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## A TON AND A HALF OF SUGAR AT WAR PRICES

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BY ILA K. MICHENER

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The editorial on page 659, Sept. 1, "Is sugar too expensive to feed?" etc., I have read with great interest. I have lived near a large marsh all my days till this year. I'm in my sixty-ninth year, and I have never found the honey gathered from goldenrod and the asters good for wintering bees, for the reason, I suppose, they never get it well ripened in this locality.

Neither is boiled honey good for wintering bees, for it is changed so much that bees will get dysentery from it before spring as well as they will from the late-gathered honey.

My bees where I have them now, near Fenwick, gathered about half a crop of clover honey; and although buckwheat was abundant it rained so much while it was in bloom they gathered very little honey from it.

We have had about twelve days now of the finest weather, and goldenrod and asters and other fall flowers have yielded well; but I have bought a ton and a half of best granulated sugar at war prices to feed my bees.

Humberstone, Ont., Sept. 23

# Heads of Grain from Different Fields



THE BACKLOT BUZZER

*The fellow who made such a howl when he bought war sugar at seven cents a pound is now sellin' it for eleven. His bees filled up on goldenrod.*

## Excessive Heat Causes Bees to Carry an Astonishing Amount of Water.

We have just had a heat wave here—125 degrees in the shade—and it was amusing to see the way the bees behaved, and how madly they went for water. The extreme heat stopped the honey-flow, but the bees took no notice of any honey exposed. All they wanted was water. They were getting their principal supply from a water-hole half a mile away. Then some of them discovered that the tap was dripping, and in a little while there was half a pint of bees hanging on to that tap. By and by the accumulation would become too great, and the whole lot would fall off; but the cluster would re-form with fresh bees instantly. I put a tub under the tap and filled it, and it was immediately rushed, and black with bees. Those from the tap fell off into the water, so I got a dead bush and lifted them out on to the grass, and instantly they were covered by others sucking the water off. I covered the surface of the water with bushes so that they could not get drowned. An apiary of 150 hives emptied a twenty-gallon tub in less than three hours. These hives had no shade-boards on, and yet only three combs split below the top-bar with the heat, and not one melted down. The bees were so crazy after water that they would crowd on to one's bare arms and suck the perspiration; and if one got a cup of water to drink the bees would be into it before you could get it to

your mouth. Now, what did they require all this water for? In my opinion, to spray over the combs and brood to prevent them from melting down with the heat.

MAJOR SHALLARD.

S. Woodburn, Aus., Sept. 12.

[We recall that bees drink a great deal more water on hot days than on other days, and yet we never heard the explanation offered that they use water brought in to spray or dampen their hives. We have never, in all of our experience, noticed any dampness in the hive on hot days, although we have repeatedly seen it on a warm day just following a cold winter spell. But why should not bees need to drink more water in extremely hot weather for the same reason that dogs, horses, cattle, and their owners do? Is it not reasonable to suppose that they need it just as they do?—ED.]

## Are Worker Larvæ Fed Royal Jelly for the First Three Days?

Referring to the statement, page 255, April 1, "Then change their minds and feed royal jelly for a queen," is not the white substance in the bottom of the cell, in which the very young worker larva is floating, chyme, or royal jelly? The fact that they are floating in it seems to me as if they had not been able to consume all that has been offered them.

This day-old larva can be scooped out with the chyme, without the least injury, and placed on the chyme in the cell-cups. I have not been able to see any difference in the queens so reared, except that they seem better than some that I have, may be on account of the selection and being raised out of the swarming season.

But if we can get better queens by any extra work, we should not spare it. Don't queens sometimes leave royal jelly in the bottom of the cell that they have not been able to consume? This is not meant to criticize anybody, but to learn all I can about the work.

Cayeiras, Brazil, April 23. CARLOS SMITH.

## Trapping Robbers Not Recommended.

In GLEANINGS just received I have noticed the editorial on trapping robber bees. Aug. 15th GLEANINGS previously outlined this plan, and I tried it once too often. It works perfectly, but it puts the bees in an inferior hive while killing out another and stronger hive. Better let them rob, and make the strong one stronger, instead.

### FEEDING CRUSHED APPLES.

I wish to inquire if it would be possible or of any worth to crush apples in a cider-mill and scatter them out for the bees during this month in place of feeding for a late September flow. Apples are practically of no cost, and I have noticed bees on fruit and juices, and think the crushed apples would also provide a bit of poultry food.

CHAS. H. CARGO.  
Bladen, Ohio.

[We would not advise the apple juice, because of the danger of bee dysentery before spring.—ED.]

## Carniolans Swarm in March.

I have been having quite an experience with Carniolans that I thought possibly would interest some of your readers. I have an outyard of about 40 colonies of these bees. On March 13 they cast the first swarm. After remaining in the air for some time they entered another hive, joining another colony. In a short time they came out again and returned to the old stand. Not being satisfied there, they soon re-entered the other colony, where they still were,

April 10. On looking through the united colony, I found one dead queen and two live ones. All were last year's queens. One queen was taken from them; and on looking over the colony a little later I discovered that they had balled and killed the other one. At this time they had no larvae. The queens had just commenced laying. I also noticed on the same day that my golden Italians had sealed brood; and, from the looks of it, it was about ready to hatch.

March 29 the second swarm issued. It was finally persuaded to return to the old hive, where it still remains. At this time there was nothing for them to gather except pollen from elm-trees and a little dandelion. Well, this was the limit, and I decided right then to get rid of all Carniolans as soon as goldens could be reared to replace them. Life is too short to be fooling with such a breed of bees. The only desirable feature about them is that they are possibly a little more gentle than other races of bees. However, I find but little difference in gentleness between them and my goldens; and when the honey-flow starts, the goldens get fairly crazy bringing it in, while the Carniolans get just as crazy at swarming; and when the season is over you have a lot of colonies to be fed for the winter. No, thank you, I don't want any more Carniolans.

Kansas City, Mo.

A. T. RODMAN.

### The Origin of the Cage Method of Introducing Queens.

Writing in 1814, after 64 years of beekeeping, Jonas DeGelieu, of Neuchatel, Switzerland, describes a cage of wood covered with wire cloth (wire grating) from which the queen is released at the end of two days. He gives the credit to Schirach; and as the latter was familiar with many very ancient methods it may have originated long before his time.

Réaumur, about 1740, introduced *direct* by giving a queen to a small cluster of confined bees. Huber, about 1790, introduced direct to a colony, *24 hours after removal of old queen*, and this practice became rather common among early English beekeepers. Many since have introduced direct after certain intervals. So far as I can find, it is only by the smoke plan that we can introduce any queen to any colony or lot of bees at any time. But one never can tell. The plan may be found in some old book or magazine one of these days. But it is good, any way.

ARTHUR C. MILLER.

Providence, R. I., July 11.

### Introducing from a Cage on the Alighting-board.

I have succeeded with the smoke method of introducing, and also the starvation and smoke plan combined. I have also had failures with them all. Just lately I have discovered a plan, new to me, that works best of all so far. I have not tried it extensively as yet, introducing only five queens, all of which were accepted.

I will explain the condition of the first colony, and the method. I caged the queen, without food or escorts. After about fifteen minutes I placed the cage on the alighting-board close to a cluster of bees. The colony had ripe cells, and I did this just after sundown. The bees collected all over the top or wire cloth of the cage, and seemed friendly. I had closed the hole in the end of the cage with a small stick that was smaller than the hole, and could be removed without disturbing the bees. After about ten minutes I removed the stick, and some worker-bees went in. I left her to her fate. The next day she was busy laying, and had cut the ripe cells down.

The next queen was introduced in the same way to a colony that had no show whatever of rearing a queen. This one was introduced before sundown.

The next one was introduced early in the morning before six o'clock. The colony in this case had sealed brood but no larvae nor queen-cells.

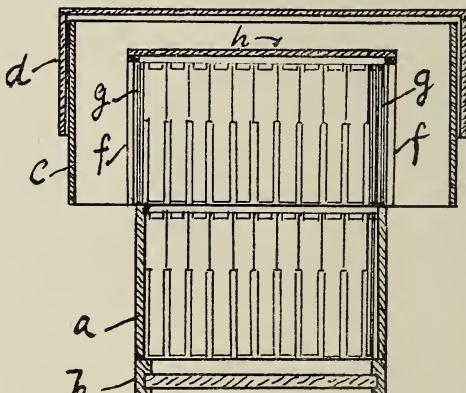
The last one I introduced was to a colony that had been queenless 24 hours. I introduced her direct from her own colony, and in ten minutes she was in the other hive being fed by the bees and crawling around on the frames. This last introduction took place in the middle of the afternoon. All were treated in the same manner except the last one, which was not allowed to get hungry before placing her on the alighting-board.

I should like to have others try this plan, and report their success or failure.

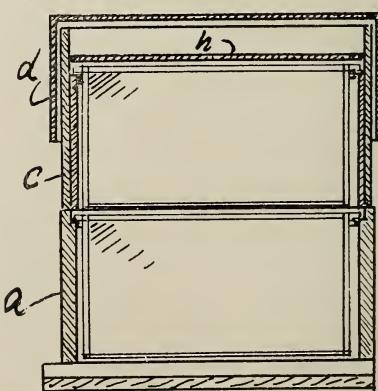
Kansas City, Mo., Aug. 9. A. T. RODMAN.

### Winter Case Used as a Super

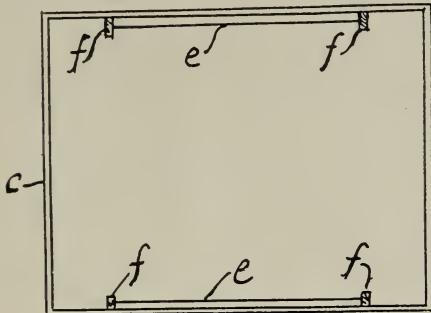
I recently secured a winter case, and altered it as shown by the sketches herewith, to use it as a super. I put in ten frames between the two division-boards in which the horizontal slots are closed. At the ends the bee-spaces are closed by the cleats f (see sketch). The bees glue the small cracks, and make the super tight.



a, hive-body; b, bottom-board; c, winter-casing; d, telescoping cover; e, boards  $\frac{3}{8} \times 8\frac{3}{4} \times 16$ , nailed inside of winter casing to carry frames; f, cleats  $\frac{3}{8} \times \frac{3}{4} \times 8\frac{3}{4}$ , nailed inside of casing to hold division-boards in place and close bee-space; g, division-boards with bee-slot closed with a strip  $\frac{3}{4} \times \frac{1}{8}$ ; h, inner corner with side cleats  $\frac{1}{2} \times \frac{3}{8}$ , resting on g and raising it above the frames to give bee-space.



My object is to make use of the winter case in summer, and not to have any bulky parts to store. I am trying to find some way of nailing on permanent



nently the padded cleats which come with the winter case.

Highwood, N. J., July 16.

J. ILTIS.

#### Sponge to Hold Water in Mailing Cage

Could not enough water for, say, a week in the mails be afforded by a saturated piece of sponge in



a smaller added compartment at one end of the usual three-hole cage, thus, and waxed inside?

#### INVERSION OF COMBS A VALUABLE FEATURE.

In looking over some recent back numbers I notice your reply in the Nov. 15th issue, p. 777, to D. W. Howell, on "reversing," or, as we call it, "inverting." (By the way, is not the latter the more correct word when we want to signify turned upside down? Besides, "reversing" cases of hives—that is to say, turning back to front, has the advantage of being distinct and separate from inverting them.) In your footnote you deprecate the value of *inversion*, so that one would conclude it is among the scrap-heap of at one-time popular ideas, and unworthy of further notice. Permit me to combat this conclusion. For 25 years I have been making my living from bees in Australia, and found no hive so handy, so profitable, and so well adapted to out-apiary expansion as one that is always readily invertible; and why? Just because inverting (at the right time) *does* destroy cells and *does* check swarming; that it enlarges the brood-occupied space; consequently, it sends the honey upstairs, and that it gets the combs built to the bottom-bars; and by thus doing one can entirely dispense with wires in frames. But to have the benefits of inversion one must have a hive adapted to it—that is, a divisible shallow-case hive. There is all the difference in the world between the process as we do it and as described by D. W. Howell, with Hoffman frames.

Cavendish, Australia. THOMAS BOLTON.

[Years ago, before queen-cage candy had become perfected, a little piece of sponge soaked in warm honey was used as a means for supplying food to a queen-bee and her attendants when sent by mail. It did not give as good results as the candy now employed, principally because the sponge would not hold enough honey, and because it dried out. While water could be given to bees in a sponge in the same way, it would have a tendency to dry out,

probably before the bees reached their destination. Of one thing we are certain: A continual supply of water, providing the supply can be regulated so as not to feed too fast, is a good thing.

The word invert is better than reverse; but the two terms have been used indiscriminately for many years, and it seems hard to eliminate the less descriptive word. We are glad to know you have had a favorable experience with inverting; but we received reports in 1885—1887 showing that it failed to do some of the very things that you claim for it. There is one thing that we are all agreed on: that inversion will accomplish filling out the comb clear to the bottom-bar. If reports we get in this country are to be believed, it is not infallible in bringing about the other things claimed for it.—ED.]

#### Refining Wax; Keeping Queens Out of Upper Stories

1. If all the bees confined with the queen in a mailing-cage die, would other bees from the same hive injure her if placed in the cage with her?

2. I have heard that, if burr-combs and pieces of wax that are not very dirty are boiled in vinegar, they will be cleaned. Can you tell me how this can be accomplished?

3. I have seen some two-story hives with brood in both upper and lower stories. How is it that the queen will sometimes lay in both upper and lower story, but not in an extracting super?

Philadelphia, Pa., July 30. J. SWEENEY.

1. It does no harm to the queen to renew the escort bees. As a precaution, however, select young bees, for they not only make better escorts, but they have more vitality. You do not need to renew these bees, of course, if you merely want to introduce the queen.

2. Wax may be refined with vinegar; but the process is quite uncertain, and quite an elaborate equipment is necessary. For this reason, and also because of the fact that there is the greatest danger of discoloring the wax or making it water-soaked, we never advise the use of any kind of acid for the average producer of wax.

3. Queens do lay in extracting-supers, and for this reason quite a large percentage of extracted-honey producers use queen-excluders under the extracting-super to keep the queen out. By special management the queen can be confined to the lower story without the use of the excluder; but the safest way is to use an excluder and be sure.—ED.]

#### Modifying the Escapes to Afford an Easier Passage when Used as Robber-traps.

I am interested in A. J. Plummer's plan for stopping robbing and disposing of robbers, for I believe it will be of great benefit to the beekeepers of to-day. I tried it out on a little different plan, and found that it worked to a success.

Take three, four, or even half a dozen Porter bee-escapes. Cut off the ends that have the holes in, leaving a straight passageway for the robbers. Insert the escapes into the entrance of the hive alongside each other so that there will be no projection on the outside of the hive, and the robbers will go in without resistance. In a very short time thousands of robbers will be trapped.

Meadville, Pa., Aug. 29. A. B. McGuire.

#### Transferring from Box Hives.

My method of transferring from box hives is as follows: The box is turned bottom side up, and a central section of the bottom is torn off, thus avoiding the breakage of honey and bringing the brood in closer contact with the frame of brood which is placed in the hive set on top. With a few empty

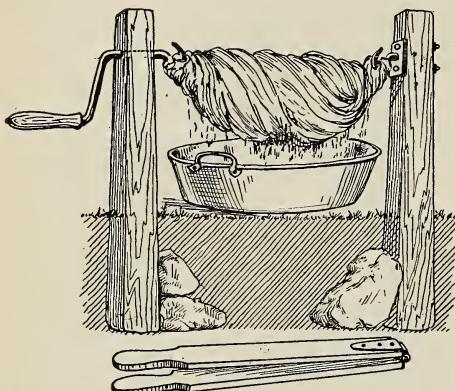
combs and one of brood in the top hive, directly above the exposed brood below, the queen readily visits the upper hive for laying, and is shut off from the box hive by an excluder. In 21 days the box is removed, and the upper story takes its place.

Cleves, O.

R. C. HUGENTOBLER.

### A \$1.00 Wax-press.

Hook a common bran-sack by the corners and middle, at ends on each hook. Put in boiling wax, about 6 quarts solid matter. Turn the crank rapidly. There is no holding, and no tucking. Turn



as tight as possible; then with a pair of sticks tied together at one end press any part not quite dry.

With cheap Cuban labor I find this far better than either the Hatch or Hershiser press.

Hendadura, Cuba.

M. C. ENGLE.

### A Marvelous Record in Catching Stray Swarms

I have noticed the article on page 473, June 15, on catching stray swarms, by my father, J. M. Kinzie. About 12 years ago, when I lived in Michigan, I read in GLEANINGS about a man in California who had lost almost all his bees, and had piled up forty hives with empty frames in them, and in the fall he had caught 17 stray swarms that took possession of them. My brother and I started out then to catch stray swarms. First we used old boxes, boring holes in them and setting them in trees; but when we got them home we always had a job to transfer the brood into frames. On this account we are now using eight-frame hives, or boxes that will hold eight to ten frames, and number them and mark the number in a book, together with the location. Trees are the best to put boxes in.

The entrances should be the same as in a hive. I use only starters, one-half to one inch wide. I formerly used one comb; but I stopped that, as the moths get in, and then it does not look good to the stray swarm. Furthermore, if a comb is used, there is more danger of foul brood breaking out again in case the swarm came from a diseased colony.

We locate these boxes along the streets and roads where people are passing, putting them 20 to 35 feet high. I set out 175 boxes this year, and caught 133 swarms so far this year, and have taken over 3500 pounds of honey from them.

I have 260 colonies all together, and I don't let my old colonies swarm. I get what increase I want by catching stray swarms. I own three lots in Arlington. There are two tall pine-trees in front of the house, and so far this year I have caught 14 swarms in them and 14 last year.

Arlington, Cal.

CHAS. S. KINZIE.

### What is a Standard Hive?

The different bee-supply manufacturers say that they manufacture hives of standard size, and that leads the beekeeper to think that the hives and brood-frames will interchange in hives of different makes. I have used hundreds of hives made by one concern, and about 1600 hives by another. I find that the long top-bars for hives of one make are too long for the other hives. I have cut off many of the top-bars before they would go into the hives in question.

The unbound queen-excluders made by one firm for eight-frame hives are too long for the hives of the other make, and one end stays on top of the hive instead of going in on top of the brood-frames; and the one end being up, it kills the bees under the one end of the extracting-frames.

I am not sure if the outside of the hive is the same size; but the thin part of the end at the top is thicker on the one make than on the other. I never measured the hives, and it may be only the thickness at the top of the end of the hive; but this makes it bad for the beekeeper who has hives made by different companies. Now, if the manufacturers could have made the supplies to exactly the same measure it would have been much better for the beekeepers. The short top-bars of the one make work well in the other hives; but only the longer top-bars will not go into the other hives.

A SUBSCRIBER.

### A Crop of Fine Honey in Maine, by an A B C Scholar.

I have had a prosperous year with my bees, and shall have 1000 to 1500 lbs. from 30 colonies. I will send you to-day by prepaid express a sample of my honey. Will you please let me hear from you as to what you think of it as regards flavor, etc.? This I send you as a gift, as I learned my A B C of bee-keeping from you, and hope that you may be spared many years, even though you do not take an active part in the work as formerly.

Oakfield, Maine, Sept. 3. R. E. TIMONEY.

The honey mentioned above is of such fine quality that we wrote regarding it. Below is the reply:

The main honey crop is the common white clover; also in the summer the odor of the alsike clover from the fields is very noticeable. There is but little basswood in the woods around here; but raspberry and fireweed furnish honey from the burnt-over places in the forest. Yes, I have a good market at from 17 to 20 cents per lb. right at my door, for all I can produce. People do not like or buy extracted honey in this section.

Oakfield, Maine, Sept. 17. R. E. TIMONEY.

### What is Honey?

BY GRACE ALLEN

"Let us see what honey is!" the solemn scholar said. Took his test-tubes and his books, bent his mighty head;

"*Lerulose and dextrose, moisture, too, and ash;*" While he wrote his formula, *how the bees did flash!*

"I know what honey is!" a little maiden cried; "On every jolly little bee a fairy sits astride; Straight ahead to fairyland he guides the jolly bee, Waves his wand, and honey comes, and they bring it back to me!"

Riotously radiant, a million million bees Flash across the meadows to the blossoms and the trees; Claim the blossom-spirits in the perfume and the sweet, Honey is the heaven where these flower-spirits meet!

A. I. Root

## OUR HOMES

Editor

Fear not, little flock; for it is your Father's good pleasure to give you the kingdom.—LUKE 12:32.

Be ye not therefore anxious, saying, What shall we eat? or What shall we drink? or Wherewithal shall we be clothed? For after all these things do the Gentiles seek; for your heavenly Father knoweth that ye have need of all these things. But seek ye first his kingdom, and his righteousness; and all these things shall be added unto you. Be not therefore anxious for the morrow; for the morrow will be anxious for itself. Sufficient unto the day is the evil thereof.—MATT. 6:31, 34.

In our last issue, page 787, I replied briefly to the *Plain Dealer's* editorial suggesting that the State of Virginia would lose \$700,000 revenue by voting dry. Since then, while reading the sixth chapter of Matthew I was impressed with the thought that God's promises cover the matter of revenue as well as food, clothing, etc. Suppose we read the 31st verse this way: "Therefore take no thought saying, What shall we eat? or What shall we drink? or Wherewithal shall we be clothed?" Can we not consistently add to the above, "Or how shall revenue be secured"? Then right after the 31st verse we read, "For after all these things do the Gentiles seek." Is not this indeed true at the present time now as well as ages ago? Then we read, "For your heavenly Father knoweth ye have need of all these things." Then comes that grand text and promise that has been a beacon light to me since I began reading it with emphasis to the boys in our Medina jail over forty years ago: "But seek ye first the kingdom of God, and his righteousness, and all these things shall be added unto you." Does not this promise, dear friends, include revenue as well as every thing else? While the above thought was in mind, the following letter came to hand:

POSTOFFICE DEPARTMENT,  
DIVISION OF RAILWAY MAIL SERVICE,  
OFFICE OF CHIEF CLERK.

*Mr. A. I. Root:*—Attached you will find a clipping taken from the editorial page of the *Cleveland Plain Dealer* of September 30. Could you give us a talk on this subject in the October 15th edition of *GLEANINGS*? I think it would do a lot of good among those of our fraternity in helping them to decide this question.

I have been a subscriber to *GLEANINGS* for about seven years, and a reader of the paper since 1890, having used my father's copy. Your records will show that he first began taking the paper in 1883.

I am also a reader of the *Plain Dealer*, and my personal opinion is that this paper is on the opposite side of this question, as witnessed by the advertisements they carry.

Cleveland, O., Sept. 30.

R. W. COBB.

Our readers will notice from the above that this letter comes from a railway mail clerk, and the expression in the letter, "our fraternity," probably refers to the clerks

in the mail service—a class of men as bright and clean, as a rule, as can probably be found in Ohio or any other State, for that matter. In accordance with the request of the writer I am going to take space to give the editorial from the *Plain Dealer* complete. Here it is:

THE WET AND DRY AMENDMENTS.

Four amendments to the State constitution come before the voters of Ohio in November. All have been initiated by petition; the legislature has passed judgment on no one of them.

The sharpest contest comes over the so-called "wet" and "dry" amendments, one of which would abolish county local option—whatever else it might do; the other would add Ohio to the ten States which already have statutory prohibition. It is narrowly conceivable that both these conflicting amendments might receive an affirmative vote in November. In all probability, however, one of the two will be rejected; both of them may be defeated.

Practically speaking, each voter must decide whether he will support the "wet" or the "dry" amendment, or vote against them both. It is a question confronting every elector in Ohio which he must decide between now and Nov. 3.

Let us see what the two amendments would accomplish if written into the basic law of the State. The "wet" amendment reads as follows:

"No law shall be passed or be in effect prohibiting the sale, furnishing, or giving away of intoxicating liquors operating in a sub-division of the State upon a vote of the electors thereof or upon any other contingency which has force, within territory larger than a municipal corporation or a township outside of municipal corporations therein."

"All laws in contravention of the foregoing are hereby repealed. Nor shall any law be passed prohibiting the sale, furnishing, or giving away of intoxicating liquors throughout the State at large."

Obviously, the amendment is vague in meaning. Attorney General Hogan says it would accomplish one thing; lawyers of equal ability declare it would accomplish that one thing and much besides. In case this provision were adopted, it would probably take a high-court decision to determine how sweeping its effects would be.

The "dry" amendment is in these words:

"The sale, manufacture for sale, and importation for sale of intoxicating liquor as a beverage is hereby prohibited. The general assembly shall provide for the enforcement of this provision, and enact laws with adequate penalties for the violation thereof."

A schedule attached to this amendment provides for its taking effect one year and six months after the election at which it is adopted.

This "dry" amendment evidently has the advantage of clearness. One who votes for it may know precisely what he is approving, so far as the text of a proposal foretells the condition it would bring about.

What, then, shall the voter do—vote "wet" or "dry" or against both amendments?

Ohio definitely adopted the license plan for controlling the liquor business two years ago. The plan itself has been in complete operation less than one year. It starts with large promise of good results, but the time has been too short to justify either a sweeping approval or disapproval.

"Wets" and "drys" in the convention of 1912 compromised their differences and voted to submit the license amendment to the people. The proposal bore the name of a "dry" delegate. In the consti-

tutional campaign there was no organized "dry" opposition to the amendment. Many temperance advocates over the State lent their support to it.

Nor has the system in operation proved false to their confidence in it. It has largely reduced the number of saloons, put the business on a responsible basis, erected effective barriers against the operation of saloons by questionable characters, and bids fair to take the liquor issue out of politics.

Neither "wets" nor "drys" should have re-opened the old question so soon after the adoption of the license amendment. And, in this connection, it is to be noted that each side in the present controversy opened its fight by accusing the other of precipitating the hostilities.

The *Plain Dealer* considers the "wet" amendment so loosely drawn and so obscure in meaning that it would be dangerous to write it into the constitution under any circumstances. Against the adoption of either "wet" or "dry" proposal we believe it may be fairly urged that it would change the license system before the system has had a chance to prove its success or failure.

Therefore, the *Plain Dealer* recommends to the voters of Ohio that they defeat both amendments.

With the fore part of the above I heartily agree; but when it comes to the statement in regard to the license plan I shall have to make some objection. The wets and drys *did* in convention agree substantially to the license plan as we have it; but when I say this, permit me to say also that the Anti-saloon League objected to a license law for the State of Ohio, first and last; but when we ascertained pretty definitely that the voice of the people was pretty sure for some kind of license law, the Anti-saloon League, as a sort of compromise, amended and modified this license law until the liquor people *themselves* did not want it. However, it was put to vote and carried, but under protest from the Anti-saloon League from beginning to end, and when the wets began to see where they were, it was under protest almost from beginning to end with the wets also. Witness the result. The wets were in such haste to get rid of the license law that they started out thus early to abolish local option and every thing else as above.

In the next to the last paragraph we read: "Each side in the present controversy opened the fight by accusing the other of precipitating hostilities." In reply to the above I think I am in position to know that it was the wets who first started out with their amendment to do away with *all* present temperance laws. The Anti-saloon League did not think of State-wide prohibition just now, and would not have thought of undertaking it had we not thus been crowded into it. That you may know I have good reason for thinking I am right in this matter, permit me to say it was my privilege to be present as one of the charter members of the first Anti-saloon League meeting ever held; and I have been in

close touch with it ever since, and have been consulted continually in regard to its every movement; and just as soon as there was a glimpse of what the wets thought of undertaking I was promptly notified, and gave my vote that we should, *under the circumstances*, mass our forces for *State-wide prohibition*.

It is true the license law has reduced the number of saloons; but the statement that "the operation of saloons by *unquestionable characters* has been a success" is untrue as almost everybody knows throughout the State of Ohio, especially in the few remaining wet counties and wet towns and cities. The *Plain Dealer* says, "Neither the wets nor the drys should have opened the old question so soon." This may be true; but it indicates how unsatisfactory it has been to both wets and drys, and to the present decision that no law nor compromise can be effected that will suit both sides. There *can* be no compromise nor any common ground between the forces of darkness and light. "Ye cannot serve God and mammon."

I am glad to hear that the *Plain Dealer* considers the wet amendment so "loosely drawn and obscure in meaning that it would be dangerous to write it into the constitution of the State under any circumstances." Amen to the above. But when the *Plain Dealer* closes up by recommending that the people vote against State-wide prohibition, I am both pained and surprised, as I have said before. The *Plain Dealer* has been our favorite daily paper so long that I can scarcely remember when we did not have it in our home. Many of its editorials have been such excellent sermons that I have quoted them again and again on these pages; but I have always felt hurt whenever I have seen glaring advertisements of liquors on its pages. When, as a result of Billy Sunday's work in Pittsburg, two great dailies rejected all liquor advertisements, I gave place to the announcement and asked why the *Plain Dealer* could not follow suit; and I repeatedly urged them to follow the *Chicago Tribune* and other prominent periodicals, and throw out their liquor advertisements. They have replied courteously, and at times at considerable length, but yet these same liquor advertisements continue. Our good friend from the Postoffice Department suggests that the advertisements they carry may have something to do with their decision to be against State-wide prohibition. Should they join the temperance people, the Christian people, the schools and churches, and the educated class of our State, to be con-

sistent, they *would* have to rule out these obnoxious advertisements, and they certainly must be obnoxious to all good people who read the *Plain Dealer*. Not very long ago one full page of that great daily was given to advertising intoxicating liquors. Another sad fact comes out right here. There is no other daily paper published in the city of Cleveland—at least no prominent daily paper—that is any better in this respect than the *Plain Dealer*.

An agent for one of the dailies assured me some time ago that *their* paper would rule out all liquor advertisements. I gave him my subscription; but the first issue received proved his mistake.

I believe it was the present Governor of Ohio who inaugurated the license scheme. In fact, this is his pet hobby; and as a loyal citizen I try to treat with reverence and respect the office of the Governor of our great State. When I saw that it seemed to be his peculiar hobby I tried to give him credit for being honest in it; yet I think he will soon see his mistake if he has not done so already.

On page 787 of our last issue, already referred to, I asked if the different States that have been dry for years were *suffering* for lack of revenue; and I think almost every wideawake citizen knows without telling that there is no such lack. The beautiful texts I have given you at the head of this talk have been corroborated, and are being corroborated again and again. The dry States have towns and cleaner towns, surely better roads, better schools and churches, and they are fast getting better and cleaner factories. As most of them are new States the factories have not, at least to a great extent, got well started as yet. But the agricultural communities are certainly away ahead in every thing pertaining to scientific and successful agriculture.

Not very long ago there was an item in the *Plain Dealer* to the effect that a certain town (I think it was in Ohio) was in "total darkness" because they had banished saloons. You see the revenue from the saloon-keepers had helped them to run their electric-light plant; and this plant was shut down on account of a lack of funds. There was neither comment nor suggestion that the town that had nerve enough to rule out saloons would very soon scrape up revenue enough to run the electric-light plant if nothing more. But even if they did not, the darkest midnight is a *thousand times* better than the glaring lights of the saloon and brothel. On page 779 of our last issue I spoke of an intemperate neighbor

who turned his wife and family out of doors during a winter night. As we had open saloons in our town at that time, I soon found this poor man in the jail with half a dozen others of like habits. I induced them to sign the pledge except my neighbor Mr. Hammer. After they all got out, through the inducement of the saloon-keepers all or nearly all broke their pledges almost immediately. About this time I met my neighbor on the street, and he called my attention to the fact that those who had signed the pledge had already broken it. Then he said something like this: "Mr. Root, under the circumstances don't you think *it was better* for me to refuse to sign that pledge? These men have broken their promise already. I have not broken mine, because I did not *make* any promise."

I mentioned this matter to the Rev. C. J. Ryder, who was then pastor of our Medina church. He said something like this:

"As you state it, Mr. Root, your neighbor, Mr. Hammer, wanted the privilege of *getting drunk with a clear conscience*." And it strikes me, dear friends, that the people who vote wet have got the mistaken idea in their heads that, by so doing, they can, in the future, "get drunk as often as they please, with a clear conscience." God forbid!

One more argument has been brought up. A well-to-do business man of our town said he could not vote for State-wide prohibition because he did not believe it was right to allow one town or one locality to lay down a rule of conduct for another town or another locality. Now, this looks very plausible; and if the tax-payers of the whole State of Ohio were not obliged to support our jails, penitentiaries, asylums, and infirmaries, there might be some consistency in it.

Once more, I told you on page 787, last issue, how our county of Medina, that has been dry for over twenty years, is cursed by a saloon only seven miles away from where I sit writing, just over the line in the adjoining county of Lorain. Have we here in Medina Co. no right to protest against this saloon, so near, that is doing a land-office business day and night, Sundays included? A big fight is going on, I think, all over our State; but I am glad to say it is a good-natured and friendly fight. I wish I could say it is a fair and honest fight on all sides.

Over in Summit Co., that adjoins us on the east, there is a bright little woman whose name has been getting into the papers of late. Some time ago a brewery in that county painted an advertisement of

their beer on her fence. She soon taught the enemy, however, that she could use a paint-brush too. I have forgotten how she fixed it; but the brewery folks found this attracted so much attention that automobiles filled with people came out to see the "new version" of their advertisement, and have a big laugh over it.

Well, Akron's oldest county paper, the *Beacon-Journal*, has just come out with a full-length picture of Miss Ellet, with the following under the picture:

**PUT ONE OVER ON OLD DEMON RUM.**

Miss Minnie J. Ellet, of Springfield Township, Akron's militant "dry" fighter, is chuckling over a victory over the demon rum.

It happened like this:

An advertising crew from Cincinnati, it seems, is going through the countryside, erecting bill-boards with arguments for the passage of the pro-booze amendment. All unsuspecting they went through Springfield and began setting one up right alongside the Ellet homestead.

Miss Ellet saw it, and the weatherman hung out the storm signal. She wanted to know what right they had to deface her neighborhood.

"State road—public property," said the bright young man in charge; "\$50 fine for any one molesting or disturbing this sign." And he tacked a little tin sign to that effect on the bulletin board.

Minnie hunted up her lawyer. She came back with a smile and three great big prohibition posters which she carefully stuck up all over the bulletin board, entirely concealing every last Cincinnati argument.

"They haven't any rights there that the law recognizes," says Minnie. "We'll post up our posters over every one of their bulletin boards wherever we can find them. I'm passing the word along to other places. We'll let old Demon Rum pay the freight for our advertising now."—*Akron Beacon-Journal*.

I call attention to the "tin sign" to show with what cheek the liquor party attempt to deceive the people. There is a law and a fine of fifty dollars for defacing or destroying guideposts or any thing for the benefit of the traveling public. This law was enacted because boys in some localities had been in the habit of smashing signboards by throwing stones at them.

Miss Ellet writes in regard to the above as follows:

*Mr. Root*:—I am enclosing a clipping. It made a "hit" here. The editor asked me to let them make the story. Two neighbors who had pulled their signs out by the roots before they knew what I wanted will plant them back Friday. I'll paint 'em black first—put the old "Grossvater" beer and all his relatives in mourning by Nov. 4, if what I can do will do the job. I wish the same could be done all over Ohio. The highway is for travel *only*, and no firm or corporation can put any sign even in the road without consent of property-owners.

Yours for the highest glory of God, and that to him belongs.

MINNIE J. ELLET.

Akron, Ohio.

Our good friend Minnie Ellet happened to be present at a farmers' picnic where the Governor of Ohio was to speak. As he was

about to bring his address to a close without reference to the wet or dry war, Miss Ellet arose, and here is a report of what followed:

**GOVERNOR COX AND THE PICNIC.**

We went to the farmers' picnic Saturday, and we heard the great Governor Cox tell the farmers of the great things he had done for the *now* great State of Ohio. But he said never a word about the three vital issues—suffrage, prohibition, and home rule (ruin)—now before the people. He told of the great revolution the new school law would bring to pass in the country school; a revolution that would cost the farmers almost nothing because the *State* was going to pay half the bill—*partly from the liquor tax*.

Well, he did give the "people" a chance to ask questions, and one of those females whom his party doesn't consider "people" butted in and asked him who paid this liquor tax. He replied: "The man who gets the license of course." She wondered where that man got the money; he hemmed a little, then he said he supposed from the consumer.

Then he jumped over to his appointing the license board; that he did it only on condition that he have power to "behead" the ones who did not obey the law. He's beheaded *just one*.—*Beacon Journal*.

Now, in conclusion, is there any one whose eyes rest on these pages who thinks that the State of Ohio is going to suffer any lack of revenue because the thousands of saloons of Ohio are put down and out for evermore? "O thou of little faith! wherefore didst thou doubt?"

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**"SWAT" THE SALOON.**

I learn by kind letters that both California and Arizona are engaged in a contest similar to the one in Ohio; and they, too, have a vote Nov. 3. A circular to tax-payers, giving an appalling array of figures, in order to show how people are being robbed, closes up by saying, "Instead of swatting the fly, swat the saloon." And would not that be a good slogan for us to help along from one State to another? Let me give you the windup from the Arizona leaflet, *after* their appalling array of figures:

Liquor forces will attack this showing; but the more they try to explain, the deeper they will get in the mire the saloon has made for them.

It will be observed that these enormous losses are annual. In ten years the burden is frightful.

Added to the expense shown by the tables is the direct cost of liquor, amounting in the whole of Arizona to \$25,000 *every day in the year*. Ten millions of dollars are spent over the saloon bars of Arizona in a year, half of which leaves the State forever. It goes to make fat the brewers and distillers of other States. This drain and the tax drain are enough to make the Arizona tax-payer arise in righteous indignation, and swat the saloon.

The revenue derived amounts to nothing compared with the enormous cost. Vote to end it. Vote Arizona dry.

TEMPERANCE FEDERATION OF ARIZONA.  
Phoenix, Ariz.

"WHAT SHALL THE HARVEST BE?"

Be not deceived: . . . neither thieves, nor covetous, nor drunkards, shall inherit the kingdom of God.—I. COR. 6:10.

I am not thinking, good friends, of the harvest of corn and wheat just now (I think we as a people of the United States can fervently thank God for the harvest of corn and wheat); but the harvest I am thinking of is in regard to the boys and girls just now of our State of Ohio. What is going to become of them—your boys and mine—

## WANTED



## A BRIGHT BOY.

your girls and mine? And we older ones can look forward with a prophetic eye, or try to, and ask what is to become of the grandchildren growing up around us. What shall the harvest be? Judging from the past I should say a certain per cent of the harvest would be (God forbid) like the picture above. It was taken from the *Australian Temperance World* of Oct. 1, 1913. Away off in Australia they are considering this matter of "what shall the harvest be?" We read above and below the picture—"Wanted—a bright boy." Who wants him? and what for? Now, some of the older people may not be able to read the placard,

especially the small print. Here is what it reads:

"Wanted—a bright boy to take this man's place. Apply to any drink-seller, wholesale or retail."

You see, if the drink business is to go on it has got to have recruits. The saloon-keepers and brewers must by some means enlist boys to take the place of the man in the picture, who drops out. The brewers cannot live in princely palaces unless they have consumers of their wares; and their motto is to create an appetite. It does not matter whose boy furnishes the nickels, just so they get them. The brewers and their wives flaunt their diamonds, and go about in showy equipages; but the boys in rags furnish the money. Do you want to help along the traffic? While your eyes rest on these words you are probably appalled by newspaper reports of the killed, dead, and dying, away over in Europe; but some good authority\* has told us that *more* people are killed and made houseless and homeless by strong drink than by this wicked war; and *these* victims go down to fill drunkards' graves. Just now every man, woman, and child in Ohio should be enlisted against the drink traffic. Take this picture, show it to your friends and neighbors, and ask them if they wish to continue to support the drink traffic. I fear there is not a township nor neighborhood in Ohio that cannot furnish one or more samples of the work of the saloon-keeper as given in the above picture.

We are told that it is always well to listen to both sides of any subject. Below is something which I clip from the *Ohio Messenger*. You will notice *they* extract it from one of the liquor journals:

### FROM THE ENEMY.

The *Pacific Wine, Brewing, and Spirit Review* makes the brilliant statement that the reason the churches oppose the saloon is that the saloons as competitors are injuring the business of the churches. People do not go to church any more, and therefore have hard work raising their salaries. They take it for granted that the reason the people are not in the church is because they are all in the saloons, and they therefore wish their business rivals suppressed.

\* We clip as follows from the *Twentieth-Century Quarterly* for September, 1914:

### SOWING ALCOHOL, WHAT DO WE REAP?

The great war in Europe has suddenly shown us what war means in the twentieth century—not alone a "hell" of wholesale murder and unspeakable physical agony and family bereavement, and a fiendish fanning of race hatreds among the combatants, but want and woe among the neutrals also, through business broken up and prices raised to the starvation point for many. But if the liquor-traffic and its consequences could be blotted out, and it were as suddenly introduced in an alcohol-free world, we should see that the Drink Monster kills as many as even twentieth-century war of great nations; wounds and cripples as many; costs as much (\$2,455,639,634 in the United States alone, and about twice as much per capita in Europe); and no less makes neutrals suffer. We who never drink must pay in the United States on our life-insurance premiums for the lives shortened by moderate drinking.

Men do not need religion, but they do need drink for the advancement of their physical, intellectual, and moral welfare.

The *Review* also volunteers the following remarkable statement:

"The human being is an alcoholic animal, consuming food which creates a demand on the part of the physical body for alcohol. The fact that all the great thinkers in art, science, and industry were and are alcoholics, may be accepted as an indication that alcoholic liquors have contributed greatly to the intellectual development of men. When it is considered that most of the crimes against virtue are committed by non-alcoholics, it is no more than right to conclude that *alcohol assists human beings to control their lusts*. There is no doubt that alcohol assists human beings to hold their greed, vanity, and ambition within bounds. It makes human beings *more considerate of their fellows* than they otherwise would be. It contributes to the development of human beings morally. All human beings should be educated to use alcoholic liquors.

"If the churches will confine themselves to preaching the ten commandments, and if they will induce their preachers to keep them, the saloons might then be willing to lend their very valuable assistance toward increasing the business of the churches."

The *Review* suggests the reason why women oppose the saloon.

"The women are also opposed to the saloons for business reasons. The women imagine that the closing of the saloons will help them to more pin money. They expect that the forced economy of the men will provide for the extravagance of the women."

I have taken the liberty to put some italics in the above. It is so extravagant, so much beyond the bounds of reason and common sense, that I think it will do good and not harm. It verifies the old proverb, "Give the Devil rope enough and he will hang himself."

Just notice the concluding paragraph. They would have us believe that our women want suffrage simply to get hold of some pin money. I wonder how much "pin money" the wife of the poor wretch whose picture I have shown above has. It probably takes every copper she can rake and scrape for *bread* for herself and children.

Notice, too, that expression, "injuring the business of the churches." It has not even entered their besotted brain that the churches and Sunday-schools are carried on for any other purpose than "business." They would put all our benevolent and Christian societies on a level with their own traffic. It makes one think of the poor deluded souls who talk about the revenue that is going to be lost if state-wide prohibition comes to pass.

## HIGH-PRESSURE GARDENING

"FROM PRODUCER TO CONSUMER;" ONE OF THE SHORTEST CUTS.

Quite a little has been said about cutting out the middleman by keeping chickens in the back yard, getting a little mill to grind your own wheat, growing vegetables in your own garden, especially potatoes, etc. Well, just now in this month of October we are having quite a quantity of the best Country Gentleman sweet corn we have had during the year. Here in Ohio, by taking a little pains you can have roasting ears by the middle of July. When I was a boy I had early sweet corn ready for the table by the 4th of July, several seasons. Now that we have much earlier sweet corn than we had sixty years ago, it ought to be an easy matter to have Golden Bantam by the first of July. Then with a little pains you can have green corn for 90 days uninterruptedly. If the frost continues to hold off we can do it here in northern Ohio for 100 days. It was somewhat by accident this season that we have it right along now in October. I think I made my first planting in May; but cold rains and cold weather kept it back so that only a part of it grew. As soon as I saw what was not coming I planted more corn in the missing hills, or just a little on one side of them;

then along in June I planted four or five varieties all the same day, the earliest to the very latest; then whenever any crop was gathered I planted some corn in its place. With one of the good land planters such as we have nowadays it takes only a few minutes to fill up vacant spaces. I do not remember the date when I planted the last, but I think it was some time early in August. During the cold weather of the past two weeks (or perhaps I should say *cold nights*) it has grown very slowly; but to-day, Oct. 1, it is just in its prime. Mrs. Root complains that the cracked wheat is more trouble than to go to the grocers and buy cereals in pasteboard boxes, and this is why I want to call your attention to green corn. You can go out into the garden half an hour before dinnertime, strip back the husks, break off the ears, and put enough in your pockets for dinner—that is, if your family is small like ours—only Mrs. Root and myself. Leave the husks on the stalks, and toward night cut off the stalks where the ears have been removed, and give them to the cow, thus cleaning up your garden as you go along. Now, on the way to the house you can pick off all the silk so as to save your wife's time and keep the litter out of the kitchen. If I am correct,

our best tender varieties of sweet corn can be cooked in fifteen minutes. Is not that a short cut from producer to consumer?

When I first begin eating green corn for summer it is apt to disagree with me. Nature has not yet become *accustomed* to the new diet; but let me suggest to elderly people that a very thorough chewing helps very much in this respect; and with the luscious green corn you can masticate it more thoroughly by taking some good bread and butter with it.

Some of you may urge that it is a great deal of work to take care of a garden; but I think most of you will find it pays big to get out into the open air more or less every day and use a hoe. There is a lot of time and money devoted just now to gymnastics; and this is all very well as far as it goes; but I heartily believe gymnastics in the garden is just as good as any thing you get from big doctors or from correspondence schools. I have taken entire care of our garden this year, of a little over a quarter of an acre. It is cultivated a few times with a horse. All the other work I have done with a hoe; and I have not only supplied our table, but I have carried basketful after basketful of nice green corn to our children's families round about me.

Now, before closing this corn talk I wish to speak again about the importance of having *good seed*. Growing your own seed instead of trusting to the merchants or the corner grocer, or even the big seedsmen, is another short cut between producer and consumer. I have selected nice specimens of all of our sweet corn to take down to our Florida home, where it will be planted in November. We have not had any frost in our Florida home that would hurt sweet corn for the past two winters, and therefore I am going to try it again. And, by the way, I want to ask you to notice the difference in germination between the seed you buy and the seed you grow and save yourself.

Now, here is something more I wish to say about seed corn.

#### SEED CORN SELECTED FROM THE FIELDS, ETC.

A year ago I went out into our cornfield and carefully selected about four bushels of ears—ears obtained from stalks where there were four in a hill; ears that had kernels clear down over the tips; ears with regular rows of kernels; ears that are hard and firm before the rest; ears that came from good strong stalks that did not get blown over by the wind, etc. Well, we had splendid germination, almost every kernel growing, and our whole crop, which is a splendid one, had kernels clear down to the

tips like the ears I had selected. Let me tell you again how it was kept. I had a cylinder made of galvanized wire cloth—meshes so small that no rat or mouse could gnaw through. This cylinder is something like a tall barrel. It was placed on a box near a steam-pipe in the basement that is kept hot all winter. This lot of seed corn pleased me so well that I thought of using the two bushels of ears left for planting another season. Then I wrote to our experiment station near by. Below is what Director Thorne says about it:

*Mr. A. I. Root*:—I have yours of the 25th, and would say that our Mr. Williams has made tests of seed corn of different ages, and has found the two-year-old seed to be apparently as good as the one-year-old, and with no material deterioration until the fourth year, after which it has fallen off rapidly in germination.

CHAS. E. THORNE, Director  
Ohio Agricultural Experiment Station,  
Wooster, Ohio, Sept. 28.

While writing Director Thorne on the above I inclosed a clipping from my article, "Beware of Pickpockets," in our issue for September 15. Below is what he has to say in regard to the matter of robbing sick people:

The clipping you send me describes an old trick, and it is the meanest kind of stealing. The intention is to work on poor people who have no money to spare; but it seems that fraud can always keep ahead. As soon as one trick is exposed, a new one is concocted.

#### BURBANK'S RAINBOW CORN, ETC.

On page 784 of our last issue I gave you a picture and description of Burbank's Rainbow corn, supposing at the time it had little or no other use than as an ornamental plant; but to-day, Oct. 2, I find it equal in quality to the very best sweet corn. The kernels, when mature, are hard and round, like popcorn, only a little larger; but at the roasting-ear stage it resembles and tastes like the Early Bantam, but it seems to be *more* sweet and nourishing, if any thing. Of course, the ears are small; but as we have several stalks containing four plump little ears, it is not a bad investment for table use. Just think of it! *beauty* and *utility* all together. It is like a beautiful hen that lays eggs every day besides. I do not know at present whether this corn is offered by any of the seedsmen. I hope it is or will be. Meanwhile every paid-up subscriber for one year or more may have *three* grains on application. I have figured up that I shall have from 10,000 to 15,000 kernels; and if 5000 apply out of our 30,000 subscribers it may take my whole crop.

#### BURBANK'S SPINELESS CACTUS.

Ever since it was heralded, perhaps ten years ago, that Luther Burbank had done a

wonderful thing in giving to the world a *spineless cactus*, I have been waiting to see how it turned out. The common wild cactus grows in our Florida home. It produces beautiful blossoms, right out in the street fronting our gate; and in the garden it is sometimes a weed that has to be dug up. It is a queer sort of plant, something like mushrooms, inasmuch as it will come up and grow vigorously where you do not want it and did not expect it, and then, again, it will not grow at all, where you do want it to grow. When we were down on the island at Osprey I found a cactus plant so loaded with fruit out in the woods that I gathered a little pailful, and found them very nice eating. Of course we had to take them on a fork and carefully peel them off with a knife, being particular to get off all the spines. Well, in view of the above you may imagine with what enthusiasm I read the following, which I clipped from a circular:

It takes root within four to six weeks after planting. The plants increase tenfold during the first year, and during the succeeding years from twenty-fold upward. In fact, there is practically an immediate return on the investment.

It is the most easily cared-for plant known to agriculture. It requires no irrigation, very little cultivation, and it thrives in the poorest soil.

An acre of alfalfa will produce only enough food to support one cow, while an acre of spineless cactus will feed eight cows. In other words, it has eight times the feeding value in quantity and quality of alfalfa.

On poor soil, 180,230 pounds of cactus to the acre has been yielded, or ninety tons of the richest kind of forage. Cactus produces nearly double as much feed the third and succeeding years as it does the second season of planting.

The leaves or "slabs" are used with extreme success as food for all kinds of stock, including poultry.

Besides the above, there were some very nice photos of cactus-plantations, and under one of the pictures of a single plant it reads like this:

This plant is fourteen months old. Eleven slabs have been cut and sold, fourteen remain—showing twenty-five slabs for one—produced in this period.

In regard to what they have to sell, the figures are as follows:

## PRICES

PRICES.  
1 to 10 slabs, 60c each; 10 to 100 slabs, 50c  
each. SPINELESS CACTUS, INC.

ch. SPINELESS  
San Antonio Tex Gunter Bldg

So far as I can remember, the prices above are about the same that they were ten years ago. From the *Florida Grower* I gather that there are several places in Florida where they have the real Burbank cactus; but I think that, as yet, they have not much of a stock, and the prices are very much as given above. In order to test the matter for myself, I made up my mind I would send for four or five slabs and give them a test in my Florida home; but be-

fore doing so I concluded I would submit the matter to my good friend Reasoner, of the Royal Palm Nurseries. Below is his reply:

*Mr. Root*.—We have several kinds of spineless cactus, all of them descended from *Opuntia ficus-indica* (see page 15 of our catalog), the parent spineless kind from which Mr. Burbank raised seedlings, etc. We sent him original plants about 26 years ago. These hybrids we have are Government hybrids, and you can get slabs of them when you return, without expense. I do not think much of these for either forage or fruit for Florida. Para grass beats the cactus certainly 1000 per cent for stock food, growing anywhere in Florida on either wet or dry soils. The cactus fruit is insipid, not to be compared with dozens of fine fruits already produced in abundance here. The only way I ever saw this fruit put up in palatable form was stewed with a bit of lemon, and sugar.

For arid conditions in Texas and other warm parts of the Western States it may be an excellent thing, as the soils there are largely too dry to produce grass or ordinary forms of forage. This cactus grows in unprotected places around Southern Florida, and we have never yet seen any of it eaten by cattle or hogs. They would have to be educated. Mr. Hall, or, rather, Mr. W. B. Collins and Mr. W. B. Thompson, have large specimens of it here near us.

Oneco, Fla., Aug. 27. E. N. REASONER.

The above reminds me that right in the neighborhood of the Reasoner Brothers' nurseries there is a cactus plant growing in a dooryard, as high as my head. It has not a sign of a spine on it—perfectly smooth. The owner informed me it was taken from the woods. Now, the Burbank cactus may be superior to this; but if one acre of cactus will produce *eight times* as much food as alfalfa, and is easy to grow, why did not our experiment stations discover it years ago, and give it to the world? I am informed the Department of Agriculture has already put out a bulletin on cacti, but I have not yet seen it. The circular mentioned above seems to indicate that it can be grown almost anywhere. In fact, I looked <sup>the</sup> circular all over to see if there is any reference in regard to its power to withstand frost. Along with the printed matter came the following:

The cuttings consist of leaves called slabs. These weigh from two to twelve pounds. It is always best to plant a whole slab. While those that are divided will sometimes grow fairly well, it is not economy to divide them.

The only cost to spineless cactus is the cost of plants and planting—no cultivating, irrigating, nor thorn-burning required. Spineless cactus is also a fine feed for poultry, and a great egg-producer.

Here's a letter that came with the above:

*Mr. A. I. Root.*—Spineless cactus is producing at the rate of 200 tons to the acre on cut-over pine land near Mobile, Ala. We anticipate opening an office in Florida, and should be pleased to receive your order for any amount you might wish.

SPINELESS CACTUS, INC.,  
Mobile, Ala., Aug. 21. S. T. DAVIS.

After the above was put in type we found the following in the *Florida Grower*:

## SPINELESS CACTUS.

WELAKA, Fla., Sept. 3.—I should like to see something in the *Grower* about the spineless cactus as a forage crop in Florida. They seem to be using it to some extent in the West; and if it will grow on their arid land there it certainly should here.

D. C. M.

**Note.**—So many very extravagant claims are being made for spineless cactus that we cannot endorse that we have kept rather quiet, and prefer to await developments. We were in California at the time when enthusiasts were claiming that this forage plant would revolutionize the cattle industry. This was eight years ago; but we hear less about it now than we did at that time. We will investigate further.—EDITOR *Florida Grower*.

## SWEET CLOVER COMING TO ITS OWN.

We take pleasure in giving the following, which we clip from the *Ohio Farmer* for Aug. 15:

## EXPERIENCE WITH SWEET CLOVER.

Having read much of late both for and against the use of sweet clover, I ask your permission to give our experience. About the second week in March, 1913, we broadcasted 360 lbs. of sweet-clover seed on 28 acres of wheat. We neglected to tell our tenant that we had supplied sweet clover instead of little red, and when we did tell him he was rather hot under the collar. I did not hold this against him, as the plant has always had a bad reputation around here.

Numerous parties were kind enough to tell him how he had filled the soil with a noxious weed that he would never get rid of. This naturally did not help matters, but, being a sensible man, he resolved to make the best of it, and the dubious ones were busy collecting all the evil things they ever heard (or imagined) about this "terrible weed."

Well, to make a long story short, after harvest we found that we did not have an even stand of our clover; but before winter set in things did not look so bad, and what we had was from 12 to 18 inches high. This growth was not clipped.

This ground was not plowed until toward the last of April, and the clover had a root growth of from 2 to 3½ feet, and from one-half to one inch in diameter, just below the crown. This meant hard work for five or six horses to the double-disk plow. The corn was planted at about the usual time, and received four or five cultivations, being laid by when hip high. It really should have had another cultivation, at least with the one-horse cultivator.

Now as to results: We have had several very hot dry spells when other corn would shrivel and show lack of moisture. At such times our corn was fresh and green as though it had received a good soaking rain. We feel to-day, and have felt right along, that we have one of the very best fields of corn to be seen in Miami County. And the best of it is, that the very ones who condemned sweet clover at first now say that it is by far the best green manure they know of for corn. Both our tenant and ourselves are glad to give the clover the credit, and we can't very well help it when we look at other fields with just as good or better soil, and see corn half or two-thirds as large, and uneven as to stand. With a fair trial I think you will find that, as a moisture and nitrogen provider, sweet clover has no equal.—W. D. ASHTON.

## SOMETHING MORE ABOUT SWEET CLOVER.

Through the kindness of our veteran friend M. M. Baldridge, of St. Charles, Ill., we give the following clipping from *Better Farming*:

## SWEET CLOVER HAS THE STAGE.

For the past two years increasing attention has been given to sweet clover as a forage plant. County agricultural agents in several States last year gave some attention to it in an experimental way. Those in Kansas and South Dakota were particularly active, and the results were so satisfactory that the area seeded this year has been enormously increased. W. E. Watkins, Allen County, Kan., reports that more than 2000 acres were seeded in that county this year. The interest in this plant has been primarily as a soil ameliorant. It is establishing itself in a very promising way as a forage plant. Last year Mr. Mosher, Clinton County, Iowa, conducted an excursion to a farm on which is grown annually 60 to 100 acres of sweet clover for hay and pasture on land worth more than \$100 per acre. On June 9 and 10 this year Mr. Bishop and Mr. Grannis, two Illinois county agents, joined in an excursion to a 300-acre sweet-clover farm in Ogle County, Illinois. One county sent 21 automobiles with 109 farmers, representing 25 townships. A total of 45 automobiles made up the train. Among the interesting things done on the farm visited is the pasturing of 60 head of cattle on 40 acres of sweet clover. The clover is also used successfully as ensilage.

Sweet clover will succeed in situations so adverse that other plants will hardly grow in them.

## HORSERADISH—HOW TO PUT IT UP FOR THE MARKET.

**Friend Root.**—As for "Horseradish, Christianity," etc. (see June 15, p. 478), I am very fond of horseradish; and if there is any profit in selling it I should like to know the best way of doing it. What kind of machinery is needed? How shall I put it up? In fact, I want all the information you can give an old man with ten little ones to care for.

T. J. CHAMBERLAIN, SR.  
Cannonsburg, Miss., July 15.

My good friend, the first thing you want to do is to get some nice horseradish roots. It needs very rich ground, and it will stand lots of water. I have seen horseradish growing in the greatest luxuriance on the borders of swamps; but nice roots can be grown in almost any garden if you make the soil rich enough and give the plants plenty of water. Cuttings are generally made of the little roots about the size of a lead-pencil or smaller, cut into three or four inch lengths. When you begin digging the roots, and trimming them, you will get plenty of the best size for planting out.

Our grinder was a home-made affair. We removed the saw from one of our buzz-saw tables and screwed on a block of wood. This block was turned into a true cylinder, perhaps 4 inches long and about the same in diameter. Then a cylinder made of tin was slipped over this cylinder of wood with one end projecting. It was slipped on to the wooden cylinder just far enough to fasten it with screws. The other end was left open. Now punch this cylinder full of holes so as to leave the burr edge out, just like the surface of a common horseradish-grater. Now, if you run this grater or cylinder at a good speed, and hold the roots against the

outside, it will grate them up very fast, and the grated radish falls into a pan underneath. You had better have your machine out in the open air, or the fumes of the radish may choke you.

Now, to put it up so it will *keep*, you must have some of the best white-wine vinegar. We tried cider vinegar, but it would spoil unless used up very soon. We put it up in 1-lb. honey-jars. If you go into the marketplaces in almost any large city you will see how horseradish-stands are operated. It sells best to grate it up right in sight of your customers, because then they know it is fresh. The machine can be turned with a crank, but it is slower work. When properly managed it is a profitable rural industry, and I believe horseradish is considered a healthful and wholesome condiment.

#### BEES AND CHERRIES, ETC.

On page 565 of our July 15th issue I made mention that people in our locality were wondering what agency brought about such an enormous crop of beautiful large fine cherries; but it did not occur to me then that our eleven apiaries scattered over this neighborhood, comprising toward one thousand colonies of bees, had any thing to do with it. Well, if you will read the following, which I clip from the *Rural Home*, you will see the connection between plenty of cherries and bee culture.

#### BEES AND FRUIT.

Honey-producing is only one of the missions of the bees. Indeed, for actual profit the honey is but a minor item.

Some years ago I moved to a small place up the Hudson River. I wanted a bee-farm, and selected for that purpose a spot among apple, cherry, and plum trees, some of which had never borne fruit, others none for years past. My landlord told me I might cut down certain trees, as they were worthless, as he intended putting on some fine nursery stock.

Being busy, I did not cut the trees down. They blossomed freely, and, of course, we paid no further heed to them than to break blossoms by the armfuls when we wanted floral decorations.

The cherry trees were, much to the owner's astonishment, loaded with very large, perfect fruit. He could not understand it. Such a thing had not happened for years.

Early in the autumn, while waiting for a swarm of bees to settle, I observed a number of fine apples upon one of the smaller condemned trees. When the landlord's attention was called to them he was completely mystified, and called in his neighbors to see the wonder. Later we gathered from this tree nearly a barrel of finest fall pippins ever seen in that vicinity.

No argument would convince the man that "them pesky bees" had any thing to do with the yield of the fruit on the place. He insisted that some sort of fertilizer must have been used.

Since that time I have demonstrated by scores of experiments that trees which had for many seasons borne little good fruit, or possibly none at all, have been brought up to a high standard of productivity by the presence of bees. They carried the pol-

len, fertilized the blossoms, and a beautiful harvest was the result.

Regardless of the honey crop, every fruit-grower should have a few colonies of bees. If when the blossom season is past there is so little nectar in the mid-season flowers that the bees must be fed, it is a decided economy to feed them, as in cases where a strict account has been kept the cash value of orchard products alone has been doubled by their assistance.

#### AN UNBIASED EXPERT'S OPINION ON SPRAYING.

The enclosed clipping, taken from Green's *Fruit Grower*, comes from Prof. Van Deman, a horticulturist who is well known in the United States as well as in other countries as one of the best horticulturists in any land. Stress should be put on what he says about spraying during the blooming period not only poisoning bees, but also because it injures the delicate floral organs and destroys them; and to spray the bloom is too early for the codling moth. I have made a study of this subject for many years; and from my observation, and from what all the leading horticulturists have said to me on this subject, Prof. Van Deman confirms what all these have said, and reiterates their experience.

Mexico, Mo., May 21.

J. W. ROUSE.

#### SPRAYING AND BEES.

*Prof. Van Deman*.—I have a place in the country, and have put out about two acres of apples, and had intended to put out about five acres more. But a friend of mine in North Acton, who netted \$6000 off his apple orchard in 1911, writes me, "I had a fine crop of apples that year. Since then the San Jose scale has made its appearance on my trees and other orchards in this neighborhood, and the necessary spraying has killed off the bees to such an extent that their work of fertilizing the apple-blossom is sadly missed."

This is a new one—to me. Can you tell me how other orchardists circumvent this difficulty?

ALBERT W. DENNIN.

*Reply*.—The facts about spraying for various insects and fungus diseases are so poorly understood, and so blunderingly carried out in the work that is done, that harm rather than benefit sometimes is the result. Honeybees and other such insects are very useful or even essential in pollinating the bloom of fruit-trees, plants, and vines, and it is both injurious and needless to kill them by poisonous spraying, except to a very limited extent. The lime-sulphur spray is not poisonous to bees, for it is applied nearly always when the trees are in a dormant condition and no bloom open. When arsenical preparations are used it should not be while the flowers are open, for two reasons. The delicate floral organs are injured by the poison, and the bees, in seeking for honey, get some of it and are killed. Moreover, the object of the spraying is to kill insects that sting or enter the fruit; and until it has set and begun to grow it is useless to spray. Sensible, intelligent spraying is all right, and rarely does much harm to honeybees or other cross-pollinating insects; but useless and harmful spraying is folly. More intelligent and faithful spraying is what is needed to make more and better fruit and to save the bees.

#### A HAND CULTIVATOR TO BE PULLED BY A GASOLINE MOTOR, ETC.

I have in my hand descriptive circulars from the Parker Motor Plow Co., Bedford, Va., with photographic illustrations of not only a gasoline-cultivator but of gasoline-plows as well. The machine that is designed for plowing is rated as  $2\frac{1}{2}$  horse power, and will do the work of a team, and requires no feed when it is not working. The company are not yet ready to put a price on the machines and offer them for sale; but they write us that at an early date they will give

us full information. A photograph shows the machine in actual operation. I think the cultivator would answer my needs nicely; but the price may be an obstacle just now. I feel sure something of this sort is coming in the near future. If it can be managed so the outfit will not cost more than the average horse, strong enough to do ordinary cultivating, I think it will come quickly into use from the one fact that it needs no feed when it is not working. Of course the matter of keeping such a machine in repair will have something to do with it.

One important item in regard to this machine I came pretty near forgetting. It is this: When you want to go away you do not have to hire a man to look after your horse. For instance, if you spend your winters in Florida, when you are ready to go back north the machine can be put in shelter and locked up, and it will be all right when you get back. It is true that somebody might volunteer to keep the horse and furnish feed for the work he might get out of it; but such an arrangement is not always satisfactory.

## HEALTH NOTES

### GALLSTONES AND OTHER TROUBLES WITH THE URINARY ORGANS.

Some of our readers will doubtless think the following belongs rather to a medical journal; but as it in fact concerns elderly people mostly, the younger ones can, if they choose, skip it. The kind letter below introduces the matter:

I read your article, "Taking Care of These Bodies," in GLEANINGS for Nov. 15. In fact, the "Homes" section is the first I turn to, as, in addition to finding them very instructive and so on, I seem to know the writer. The article in question, is all it should be; but it contains one serious error which I think it my duty to call attention to. The second sentence on page 824 says, "He did not have to get up once in a night, as a rule." Some years ago I was seriously troubled with gallstones. My doctor, an exceedingly able man, inquired, "Do you get up during the night to ease yourself?" I said, "Never." He replied, "You must do so—once always, as, during the night, the salts in the urine solidify and form the basis of these stones." For years I have been free, and I think this simple getting-up once or perhaps twice during the night has been a benefit, and therefore should be encouraged.

I have a very strong antipathy to publicity, so please oblige me by withholding my name and address.

My good friend, I am very glad indeed that you have taken up this matter, for it has been a long time on my mind. I have much reason to think you and your doctor are exactly right about it. Although it is, without question, quite desirable to have the digestive apparatus, kidneys, liver, bladder, doing their work so thoroughly and naturally that one does not have to get up in the night at all, I think most elderly people have come to the conclusion that the general health is conserved by going to the water-closet much oftener than they did in youth or middle age.

Let me again go over the ground that we have discussed pretty thoroughly already. Years ago, while in the jewelry business, especially when I did not have a clerk to take my place, I often put off nature's call

because I could not well excuse myself from customers. This finally made trouble. Those of our readers who "keep store," or at least many of them, will understand this. Well, the result was, finally, that I not only had to get up in the night, but sometimes several times. Of course the diet as well as outdoor exercise has much to do with it. Years ago, in Dr. Chase's recipe-book a man told about finding that crabapple cider gave him great relief from such urinary trouble. I tried it on a small scale, and found it of so much help that I gathered several bushels of crabapples—the wild sour kind—and kept the cider by scalding and bottling it so as to have it all winter. It certainly is a splendid medicine. In later years I have often spoken of grapefruit in the same way. Just as soon as I get down to Florida, where I can have plenty of grapefruit, I sleep soundly all night without thinking of getting up. Certain acid fruits seem to have been intended by the Almighty for correcting these troubles. The sour Florida orange that grows almost wild answers the same purpose as the grapefruit. Cherries not too tart act in much the same way; also the nice ripe apples I have so frequently mentioned; and of late I have greatly enjoyed common currants, especially when they are dead ripe. When hot weather comes on, and there is a tendency toward what is called "summer complaint" when your mouth tastes bad and even a good drink of water does not "hit the spot," try a small handful of currants, dead ripe; and if it does not sweeten and refresh your whole system you are different from myself. I have just been wondering why we cannot have currant juice put up in little bottles just as we have grape juice. I would pay a big price for a little currant juice—no sugar nor any thing else with it—put up in this way. Somebody may suggest lemons, and lemons are really

a Godsend for many such troubles; but the acid, I find, is too harsh for my digestion unless I put in sugar; and cane sugar is quite sure to disagree with me. Very likely some lemonade sweetened with *honey* might come pretty near grapefruit.

Now to the point our good brother makes. When I do not have grapefruit or currants I often have troubled dreams, and finally wake up feeling exceedingly uncomfortable, and with a suggestion that the blood in my veins is poisoned with impurities or something else. I do not know any better way to express it. Now, at such times there seems to be a very strong disposition against getting up and going to the water-closet; and I often just turn over, being only half awake, and go to sleep again. More troubled dreams and more distress follow, even if I am only half asleep. If it is quite cold weather at such times I feel a strong aversion toward getting out of a warm bed into the cold air, for you know we always sleep with doors and windows wide open (well screened, of course). Well, before I received the above kind letter I made up my mind that it must be injurious to *yield* to the lazy feeling, instead of getting up right promptly as soon as nature gives warning; and since I have practiced jumping out of bed at once, be it one, two, or three o'clock, and going to the water-closet, my health has visibly improved. You see it is nature's call, or *warning*, perhaps I might say, that the impurities eliminated by the kidneys should be gotten out of the system as speedily as possible. Very likely if the digestive apparatus were in proper condition there would be no such impurities to collect and endanger the health; but if they do collect, get them out of the system as soon as possible. A neglect to do this will, as the doctor states above, result in gallstones, inflammation of the bladder, and no end of trouble. After getting up in the night, as I have described, letting nature have her way, then rinsing my mouth with cold water, and finally taking a good drink, and at the same time giving my arms, limbs, and chest a good brisk rubbing to start up the sluggish circulation, I go back to bed and get the most refreshing sleep of the night. I grant you that a better way would be to avoid the necessity of getting up, say by the use of grapefruit, crabapple cider, or something of that kind. But when you *do realize* that your circulation is impaired, shake off the lazy, sleepy feeling and spring out of bed at once. Now, some of the good family physicians among our readers may think the above not strictly orthodox; and if so

I should be glad indeed to receive their criticism.

My friend W. P. Root suggests right here in my dictation that the above depends largely on what we eat and drink after supper, or just before going to bed. If one "fills up" on watermelon, for instance, during the evening he may *expect* disturbed sleep. And this reminds me that I have neglected to say in the above that nothing passes *my* lips except pure water after my fruit supper between four and five o'clock and bedtime.

By the way, here is something more in regard to the same matter. Please notice particularly the closing sentence.

*Mr. A. I. Root*—I wish to congratulate you on the (to me) sensible talk you gave in Our Homes for Nov. 15, 1913, about taking care of these bodies of ours. I believe almost wholly with you on that subject, and think it would be a good idea for that article to be printed at least twice a year; in fact, keep it before the people—fresh air, plenty of exercise, and good wholesome food and warm clothing. This goes a long way toward keeping us in good health; also attending to the slightest call of nature. That is a thing that is badly abused through real or fancied modesty.

Derby, Nev.

H. E. ORDWAY.

To have every thing plain without any risk of misunderstanding, permit me to say in closing that all the above refers only to emptying the bladder. In regard to a movement of the bowels, *my* health is very much better when they move only once a day, say an hour or two after my morning meal. Terry and the Battle Creek folks, you may notice, recommend two movements of the bowels, or, better still, *three*. I suppose we are not all alike in this respect, and each one must decide for himself; but I would stoutly object to the daily use of physics or hot-water enemas that were so much talked about years ago. The hot-water enemas are all right in case of an emergency, but I am sure they are *not* right for daily use nor to use too frequently.

#### LIVING TO BE OVER 100 YEARS OLD.

In Terry's book, "How to Keep Well and Live Long," he mentions in two different places a Captain Diamond who was over 100 years old at the time the book was published. One of our readers sends me the following clipping from a newspaper:

**SAN FRANCISCO**, Aug. 15.—Capt. Goddard Eze-  
kiel D. Diamond, who, according to his own state-  
ments and evidence, was 118 years old, died here  
late last night.

If any of our readers in the vicinity can give us any further particulars in regard to this unusual longevity, we shall be very glad to get it.

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**FOR SALE.**—Three-banded Italian queens, from the best honey-gathering strains, that are hardy and gentle. Untested queens, 75 cts.; 6, \$4.25; 12, \$8.00; tested queens, \$1.25; 6, \$7.00; 12, \$12.00. Selected queens, add 25 cts. each to above prices. Breeding queens, \$3.00 to \$5.00 each. For queens in larger quantities, write for prices and circulars.

ROBERT B. SPICER, Wharton, N. J.

## MUSIC

A SONG OF MOTHER AND HOME. The most famous Song of Home ever written. It will remind us that our lives, like the sands in the hour-glass, which run so swiftly, are rapidly drawing to a close. Those who sing or listen to this song will surely gain an inspiration to think more of the life beyond. Regular price, 50 cts. Special Christmas offer, 30 cts. Send 15 2-cent stamps and you will receive a copy by return mail. BOSTON VOCAL ART CLUB, Dept. E, 178a Tremont St., Boston, Mass.

## POULTRY

As I had the highest-scoring R. C. B. Leghorn in the Hudson poultry show I will sell a fine lot of R. C. B. Leghorn cockerels for \$1.00, \$2.00, \$3.00, and a very fine one for \$5.00.

GEORGE J. FRIESS, Hudson, Mich.

EGG STOCK.—Pure-bred pedigreed Barred Rock cockerels and hens. Mothers laid over 200 eggs in 10 months. Sires have 15 years of pedigree breeding for eggs behind them. Grandmother laid 217 eggs in third year of production. Pen of my hens stand eighth among 100 pens in Missouri Egg-laying Contest. Eggs in season. Speak quick. Prices of cockerels, \$5, \$8, and \$10. B. F. W. THORPE, 358 S. Yellow Springs St., Springfield, Ohio.

## MISCELLANEOUS

**FOR SALE.**—One 22-cal. Winchester repeater rifle, \$6.50; Wizard Sr. camera, 4 x 5, \$10.00; Indian motorcycle, 7 H.P. twin cylinder, \$175.00. Run only 500 miles.

A. B. CRANE, Carmel, N. Y.

**FOR SALE.**—200,000 finest-named varieties gladiolus bulbs, among them America, Augusta, Chicago White, Independence, and 25 other leading varieties. If interested, write for bedrock prices.

E. T. FLANAGAN & SONS, Belleville, Ill.

## SITUATION WANTED

**WANTED.**—A sober young man who has had experience, a position in bee yard for the season of 1915. **ALEX. ELWOOD**, Walton, N. Y.

Man would like to work in apiary where he could learn the business. Wages no object. Will go to any part of the country. **C. ERICKSON**, Quil Hotel, Box 18, Crocket, Cal.

## BEEKEEPERS' DIRECTORY

Well-bred bees and queens. Hives and supplies. **J. H. M. COOK**, 70 Cortlandt St., New York.

Nutmeg Italian queens, leather color, after June 1. \$1.00 by return mail. **A. W. YATES**, Hartford, Ct.

**QUEENS.**—Improved red-clover Italians bred for business June 1 to Nov. 15, untested queens, 75 cts. each; dozen, \$8.00; select, \$1.00 each; dozen, \$10; tested queens, \$1.25 each; dozen, \$12.00. Safe arrival and satisfaction guaranteed.

**H. C. CLEMONS**, Boyd, Ky.

## Convention Notices

The twenty-fourth annual meeting of the Illinois Beekeepers' Association will be held at the State House, Thursday and Friday, Nov. 19 and 20. Hon. N. E. France, of Wisconsin, will be with us. His subject will be, "Short Cuts." Prof. J. G. Mosier, University of Illinois, will speak on "Sweet Clover." Mr. C. P. Dadant, of Hamilton, Ill., and Dr. E. F. Phillips, of Washington, will speak on "Temperature and Moisture of the Hive in Winter." Come prepared to help make it a good meeting.

**Springfield, Ill.** **JAS. A. STONE**, Sec.

There will be a meeting at Akron, Erie Co., N. Y., on Tuesday, Dec. 15, 1914, at the American Hotel, commencing at 10:30 A. M., and closing at 3:30. Some of the best beekeepers in western New York will be there to speak. There will also be other discussions on bee culture. This meeting, coming soon after the Syracuse meeting, will give those residing in western New York a chance to learn the latest in beekeeping, and also a chance to form a branch of the N. B. K. A. Akron is well situated, being but 20 miles east of Buffalo. It has good railroad accommodations and two State improved highways. The American Hotel is an ideal place for such a meeting, offering first-class accommodations at a reasonable rate. The large hall is free to all. Come and get acquainted; learn something new; see what the other fellow is doing; get together, talk it over; have a good time—take a day off. It will pay you in the end.

The fall convention of the Connecticut Beekeepers' Association in the old Senate Chamber, State Capitol, Hartford, Ct., will be held on Saturday, October 24, 1914.

Morning session will be devoted to informal gathering, payment of dues, etc. Afternoon session, regular business, report of Connecticut Fair Committee, and addresses. It is expected that important action will be taken at this meeting relative to the establishment of an apiary at the Connecticut Agricultural College, for which the association has been working for several years.

The program committee announces the following: Mr. O. F. Fuller, of Blackstone, Mass., president of Worcester County Beekeepers' Association, and originator of the famous "Fuller candy" for winter feeding, will address us on "Experiments with Bee Foods," demonstrated, and "Rearing Queens in the Brood-chamber with a Laying Queen." Those who failed to hear Mr. Fuller at Amherst on June 12, last year, should not miss this opportunity. The remainder of the program follows:

Lyman C. Root (subject to be chosen).

W. K. Rockwell, "Signs of a good queen."

John Thorret, "Wintering."

Question-box, etc.

**L. WAYNE ADAMS**, Sec.

## EXHIBITS AT THE LOUISIANA STATE FAIR.

The newly organized Louisiana State Beekeepers' Association will meet on Monday, Nov. 9, at 10 o'clock, for the purpose of transacting any business that may properly come before the body. It is earnestly desired that every one interested in bees be present. An endeavor is being made to secure good speakers to make talks on bee culture.

Those wishing to make exhibits at the fair should take up the matter at once with Mr. Louis Brueggerhoff, Secretary of the Fair, Box 1100, Shreveport, La.

Any one desiring to become a member of the Association may do so by sending his dues to L. T. Rogers, Box 361, Shreveport, La. Dues are \$1.00 a year for the National and 50 cents a year for the State. National members will receive free the *Beekeepers' Review*, official paper of the National Association. Beekeepers may belong to the State Association and not to the National, if desired.

**G. FRANK PEASE**, President.  
**L. T. ROGERS**, Secretary-Treasurer.

The third annual convention of the Iowa Beekeepers' Association will be held at Agricultural College, Ames, Iowa, November 17, 18, 19, 1914, in connection with short course in apiculture and hive products. The following is the program:

Tuesday, 10:00 A. M.—Welcome and Response; Address of President, Frank C. Pellett, Atlantic; Report of Secretary, S. W. Snyder, Center Point; Report of Treasurer, C. H. True, Edgewood; Appointment of Committees.

1:30 P. M.—Short-course demonstrations in charge of C. E. Bartholomew, Professor of Apiculture, Iowa College of Agriculture.

7:30 P. M.—History of Beekeeping, C. P. Dadant, Editor *American Bee Journal*; Honey Flora of Iowa and Nectar Secretion, Dr. L. H. Pammel, Ames; Beekeeping in the Inter-mountain Region (illustrated), Wesley Foster, Boulder, Col.

Wednesday, 9:00 A. M.—Fifty Years of Beekeeping in Iowa, F. Kretchmer, Council Bluffs. Temperature and Moisture of the Hive in Winter, Dr. E. F. Phillips, Washington, D. C. Wintering Bees in Iowa, W. S. Pangburn, Center Junction. Experience with European Foul Brood, J. I. Wiltsie, Arlington. Discussion, led by L. W. Elmore, Fairfield. Experience with American Foul Brood, D. E. Lhomiedieu, Colo. Ia. Discussion, led by J. W. Stine.

1:30 P. M.—Short-course demonstrations.

7:30 P. M.—Individual and Co-operative Methods of Marketing Honey, Wesley Foster, Boulder, Colo. Discussion, led by P. J. Doll, Minneapolis, Minn. Modern Short Cuts in Beekeeping, N. E. France, Platteville, Wis. Subject to be announced, Dr. L. D. Leonard, Minneapolis. Moving pictures of the bee.

Thursday, 9:00 A. M.—Wild bees of Iowa in their relation to plant pollination, L. A. Kenoyer, Toledo. What the Agricultural College can do for the beekeeper, Prof. Francis Jager, University of Minnesota. Reports of committees, election of officers.

1:30 P. M.—Short-course demonstrations.

The domestic science department of the college will entertain the ladies present on Wednesday afternoon.

## OFFICERS FOR 1914.

President, Frank C. Pellett, Atlantic; Vice-president, J. W. Stine, Salem; Secretary, S. W. Snyder, Center Point; Treasurer, C. H. True, Edgewood.

## DIRECTORS.

E. C. Wheeler, Marshalltown; Dr. A. F. Bonney, Buck Grove; Hamlin B. Miller, Marshalltown.

Every beekeeper is urged to bring some samples of his product for exhibition. No premium list can be offered in advance; but the committee on awards will make such a disposition of the funds available as seems equitable. But a small cash fund is available this year; but we hope for such a creditable exhibit as will enable the association to arrange a liberal premium list in connection with next year's convention.

A large display of supplies of standard makes will be on exhibition as well as many new specialties, and beekeepers will have an opportunity to see for themselves what value there is in the new offerings.

It is expected that prominent queen-breeders will also exhibit. The following supply dealers have already signified their intention of placing some of their goods on display:

A. I. Root Co., Medina, Ohio; Dadant & Sons, Hamilton, Ill.; Kretchmer Manufacturing Co., Council Bluffs, Ia.; Minnesota Bee Supply Co., Minn.

## SPECIAL NOTICES

BY OUR BUSINESS MANAGER.

### BEESWAX STILL LOWER.

There has been a further decline in the market price of beeswax, due in large measure to the disturbing effect of the war in Europe. We quote, till further notice: 30 cts. cash, 33 trade, for average quality delivered at Medina. The general decline has been much greater than our quotations would indicate. We have recently been offered imported wax as low as 27 cts., whereas this same wax four or five months ago brought as high as 37 cts. a pound. We have reduced our cash offer only 3 cts. a pound, and trade price 2 cts.

### SWEET-CLOVER SEED.

We are now provided with a fair stock of new hulled white-clover seed and some choice last year's seed in other varieties which we offer at the following prices:

	1 lb.	10 lb.	25 lb.	100 lb.
White sweet clover, unh'd	.20	\$1.80	\$4.25	\$16.00
<i>Melilotus alba</i> , biennial				
White sweet clover, hulled	.26	2.40	5.75	22.00
Yellow sweet clover, unh'd	.20	1.80	4.25	16.00
<i>Melilotus officinalis</i> , bien.				
Yellow sweet clover, hulled	.26	2.40	5.75	22.00
Yellow sweet clover....	.08	.60	1.25	4.00
<i>Melilotus Indica</i> , annual (hulled old seed).				

### SIX PER CENT DISCOUNT FOR OCTOBER CASH ORDERS.

To those who buy now for next season, sending remittance with the order during the month of October subject to the conditions named below, we allow 6 per cent discount.

This discount will apply on all articles listed in our regular catalog at current corrected prices to date except as follows:

Tinned wire, paint, Bingham smokers, Porter bee-escapes, glass and tin honey-packages, scales, bees and queens, bee-books, papers, labels, printed matter, bushel boxes, seeds, and specialties not listed in our general catalog. Where any or all of these articles in a general order do not exceed fifteen per cent of the whole order, the discount may be deducted from the whole order, including these items which are otherwise excepted.

### SECOND-HAND FOUNDATION MILLS.

We have to offer the following list of foundation machines which have been used, but are in fair condition. In many cases they will answer as well as a new machine where you have only a moderate output. Send for samples of any mill in the list which may interest you.

No. 0139, 2½ x 6 hexagonal thin super mill in very good condition. Price \$14.00.

No. 0140, 2½ x 6 hexagonal thin-super mill in very good condition. Price \$14.00.

No. 0147, 2½ x 6 hexagonal thin-super mill in good condition. Price \$12.00.

No. 0153, 2½ x 6 hexagonal thin-super mill in very good condition. Price \$14.00.

No. 0156, 2½ x 6 hexagonal extra thin-super mill in fair condition. Price \$10.00.

No. 0165, 2½ x 6 hexagonal extra thin-super mill in fair condition. Price \$10.00.

No. 0183, 2½ x 6 hexagonal thin-super mill in very good condition. Price \$14.00.

No. 0207, 2½ x 6 hexagonal thin-super Dunham mill in good condition. Price \$10.00.

No. 0214, 2½ x 10 hexagonal light medium-brood mill in poor condition; rolls quite badly pitted; will make fair foundation. Price \$13.00.

No. 0215, 2½ x 10 hexagonal medium-brood mill in good condition. Price \$24.00.

No. 0218, 2½ x 10 hexagonal medium-brood mill. This is practically a new mill in excellent condition. Price \$30.00.

No. 0219, 2½ x 10 hexagonal medium-brood mill with an injured spot near one end; in good condition. Price \$16.00.

No. 0220, 2½ x 10 hexagonal medium-brood mill in fair condition. Price \$18.00,

No. 0221, 2½ x 10 hexagonal medium-brood mill; good except for a spot 2½ inches from end of roll. Price \$15.00.

No. 0222, 2½ x 6 hexagonal thin-super mill in extra good condition. Price \$14.00.

No. 0223, 2½ x 12 hexagonal medium-brood mill in very good condition. Price \$30.00.

No. 0224, 2½ x 12 hexagonal medium-brood Dunham mill in good condition. Price \$18.00.

No. 4119, 2½ x 10 medium-brood mill. A new mill tested and returned only because plans were changed; in excellent condition. Price \$32.00.

## SPECIAL NOTICES

BY A. I. ROOT

### OFF FOR FLORIDA.

Mrs. Root and I expect to leave for Florida at 9 o'clock on the evening of November 4. (We take the Big Four train at Grafton, O.) Therefore all communications to A. I. Root after that date should be addressed to Bradenton, Fla., instead of Medina, O. Every thing pertaining to the business of The A. I. Root Co. will, of course, be addressed to Medina, O., as usual; but personal letters to A. I. Root or in regard to matters in his department should, for the next six months, go to Florida, as heretofore.

### THE BREWERS' HOME-RULE AMENDMENT.

We clip the following from the *American Issue* for Oct. 6:

Up to date not a newspaper in Ohio has raised its voice in behalf of the brewers' home-rule amendment.

### PROHIBITION IN THE ARMY.

After some sad experience a short time ago with intoxicants among the soldiers, Russia has just now established prohibition in its army; and we are told by the *American Issue* that it has proved to be so beneficial that it has been ordered to be continued indefinitely. Now, just at this crisis it is a pretty big joke for one of the beer papers to come out as announced, and say what a misfortune it is to deprive the "poor soldiers" of drink when they need it so much to keep up their courage(?), and to help them to stand fatigue.

### THIRTY MILLION DOLLARS LOST(?) TO THE STATE OF OHIO.

Here we are again on the same old racket. We clip the following from the *Plain Dealer* of October 9:

WETS SAY DRY VICTORY WILL COST STATE \$30,000,000.

COLUMBUS, Oct. 8.—The loss of revenue in Ohio, if the prohibition amendment to the State constitution is voted upon Nov. 3, will be \$30,000,000, according to a statement issued to-day by the Ohio Home Rule Association, opposing the dry amendment.

Point also is made that the finances of cities will be in much worse condition than they ever have been. "Worse than financial chaos will result," says Graham P. Hunt, of the League.

The above clipping is taken from the reading-matter, and right below it is an advertisement reading:

Try a case of Lemp's Falstaff bottled beer.

Is the story about the revenue something furnished by the firm that furnishes the beer?

Are not our friends the wets "giving themselves away" in the above statement? Is it indeed *true* that so much money is being paid out for liquor here in Ohio that it affords a "revenue" to the State of *thirty million dollars*? and is it true that the finances of any city or State in our nation are put on a healthy and substantial basis by the consumption of thirty millions of dollars' worth of intoxicants? Once more, have the States that have voted dry, and have been dry for years, any trouble about raising their revenue?

"WILL YOU KINDLY POINT OUT TO THE CITIZENS OF CLEVELAND ONE GOOD THING THE SALOON HAS DONE FOR THEM?"

The following, which we find in our much-quoted *Plain Dealer* for Oct. 10, makes us feel happy:

Continuing the cross-fire of open letters, John A. Chamberlain, chairman of the Cuyahoga County Dry-campaign Committee, yesterday forwarded a challenge to Chairman E. J. Blandin, of the opposition forces, in which he stated:

"I understand that you and your organization are urging the people of Ohio to vote down the amendment which will abolish saloons in Ohio.

"I believe the people in Cleveland would like to know what the saloon as an institution has done for the citizens of Cleveland.

"I charge it with increasing taxes, taking away men's jobs, making children ashamed of their fathers, ruining boys, debauching politics, and causing more misery and crime than any other single force.

"Will you kindly point out to the citizens of Cleveland one good thing the saloon has done for them?"

Here is something more that is good from the *Plain Dealer*. We clip it from the end of an editorial in its issue for Oct. 10.

The *Plain Dealer* is convinced that fairness and justice to the women of Ohio demand that the suffrage amendment be ratified.

#### "THIS HOME VOTES DRY."

At a temperance gathering last evening, Oct. 6, our Mr. Calvert made mention of the fact that between here and the town of Oberlin, about 25 miles away, many houses are placarded with large letters that can be read distinctly from the street, "This home votes dry." After Mr. Calvert sat down I rose up and asked him if he noticed any

houses placarded "This home votes wet." There was some laughter and cheering at this, especially when Mr. Calvert replied that he did not see any such house on the whole trip; and I have been wondering if there is in the whole State of Ohio a voter who would be willing to have tacked on his front door "This home votes wet." In connection with this, did any one ever hear of any town, from Maine to Florida, that urged people to go there and live because, among other desirable features, they had plenty of saloons? While there are a few who claim that saloons bring business, no one seems to want to stand out in broad daylight and proclaim himself a champion of the liquor-traffic. If during the next four weeks the whole State of Ohio should decide to put a notice on their homes, as mentioned above, my impression is it would be a mighty power for temperance and righteousness. The wets are afraid of publicity, but not so, thank God, the drys. Are you, my good friend, whether you live in Ohio or some other State, ready to stand out before the world and say, "This home votes dry"?

Surely the good wives will help; and will not the whole W. C. T. U. in the State of Ohio see that the cards are to be had for the asking?

#### A GLIMPSE OF THE "SALOON FIGHT" IN ARIZONA.

*Mr. Root*—We enjoy your writings in GLEANINGS very much. I am enclosing ten cents to pay postage on the book, "The Saloon Fight at Berne, Ind."

We are having a saloon fight here too, and are going to vote for an amendment to our constitution which, if it carries, will make our State dry. We have a most beautiful town here of 5000 inhabitants, and a climate unsurpassed and seldom equaled: but we are cursed with 26 saloons; and, oh they have destroyed so many! and this beautiful town has been dominated by them so long!

One meeting was continually interrupted by men hired by the saloons, and that, too, after they had prevented us from meeting on the public plaza by hiring the supervisors to forbid us the use of the plaza, and compelled us to meet on a vacant lot, they doing all in their power to prevent our meeting there.

Pray for the amendment, that it may carry.

One thing more: The saloon men have put up huge posters with the picture of Woodrow Wilson, the President, and also Mr. Taft, claiming that they say prohibition is and always has been a failure. I have my doubts that Mr. Wilson ever made such a statement.

MRS. H. A. WALLINGFORD,  
Prescott, Ariz., Sept. 27

My good friend, I think I can say very positively that our good President never made any such statement as you quote; and I feel sure, also, that the same is true of President Taft. They may have thought

that, under the circumstances, at the time they spoke, local option was more feasible than State-wide prohibition; but, like the Anti-saloon League, I think they have always maintained that local option is a steppingstone to ultimate prohibition. What you mention is only a fair sample of the unscrupulous way in which the liquor men work to hold on to their traffic.

GOD'S KINGDOM COMING; SOME GOOD NEWS  
IN THE WAY OF LAW-ENFORCEMENT  
FROM TENNESSEE.

Tennessee's capital, so long defiant of that State's prohibition law, furnishes now a glorious illustration of the victory that comes to those who fight for the enforcement of a righteous law and keep on fighting. If prohibition does not wholly prohibit, as Sam Small says about the boy trying to stop the yearling, "it slows the thing up a little"—a big little, thanks to the Lord and Governor Hooper. Here is the thrilling proof from *The Nashville Banner*:

"Six huge drayloads of assorted liquors were poured into the Cumberland River this morning by the receivers in the nuisance cases, acting under the direction of Aust & McGuin, special attorneys for the State, employed by Governor Hooper to prosecute the cases.

"The liquor poured out ranged in quality all the way from mean "bust-head" whisky and plain domestic beer up to absinthe and fine brandies and cordials. There were more than sixty barrels of bottled beer, several barrels of whisky, and eight cases of absinthe, besides smaller quantities of other liquors. It was valued at several thousand dollars.

"The outpouring began shortly before noon. The liquors, which filled four storage rooms in the First National Bank Building, were hauled to the wharf, and there the barrels were opened up, the bottles opened, and the liquor allowed to run out into the river. Although a score of willing hands were busy opening the bottles, it required the greater part of the afternoon to complete the job of opening the huge stock. The bottles were gathered up and placed back in the barrels, to be sold to the junk men to help meet the expenses of the cases.

"Two moving-picture machines, one from the Crescent Amusement Company, of Nashville, and one from the Bon Ray Film Company, were on hand to photograph the unusual incident.

"Why, ladies and gentlemen, nothing quite so glorious has occurred in the realm of law-enforcement since the brilliant boozebusting party of Mayor Beverly, of Thomasville, Georgia, when he invited in his friends to see six hundred bottles of blind-tiger liquor dashed against a helpless wall."

We have only two comments to make about the Tennessee incident:

1. First it was a shameful imposition on the fish and tadpoles in the Cumberland River.

2. When a State has laws that "hit the spot," and a Governor who means business, law-breaking communities and individual law-breakers can be brought to their knees.

Governor Hooper, who is not afraid of anything that drinks booze or "wears breeches," has bravely led the fight for law-enforcement in Tennessee, and the Volunteer State is being purged, thank God, from the mountains to the Mississippi.—*Golden Age*.

Now, friends, after we get State-wide and nation-wide prohibition our work will not be done. We want men like Governor Hooper. Can we find them?

"THE HIGH COST OF LIVING."

The above heading was called out by the clipping below, as you will notice, from the *Baltimore Despatch*, in reference to the high cost of living. Perhaps it would be better to put it "the cost of *high* living." I am glad to see that the list comprises jewelry and millinery. I suppose they mean, however, unnecessary jewelry and millinery. Now, those of us who do not spend money for any of the things mentioned below (and there are quite a lot of people nowadays, I think, who can honestly plead "not guilty" to the charge), should these good people be taxed for the excesses of the other class—tobacco and intoxicants, etc.? Here is the clipping. Read it, and see how much of it hits you:

COST OF UNNECESSARIES.

The cost of some of the "unnecessaries of life," according to Dr. Biederwolf, is: Jewelry, \$800,000,000; candy, \$200,000,000; chewing gum, \$21,000,000; tobacco, \$1,200,000,000; millinery, \$90,000,000; soft drinks, \$120,000,000; theatres, \$750,000,000; intoxicating liquors, \$2,000,000,000.

Just a word more about soft drinks. I have for years past been satisfied they are not only unnecessary, but that sweet drinks taken during the day between meals and at night are a positive harm to the digestive apparatus. God grant that Dr. Biederwolf may *keep on* preaching—and Billy Sunday too.

SILLY NOTIONS, SUPERSTITIOUS NONSENSE,  
ETC.

*Mr. Root*:—In GLEANINGS for Sept. 15, 1913, you were speaking of silly notions, etc. I copy the following from the *Farm Journal* for October, 1913, page 524.

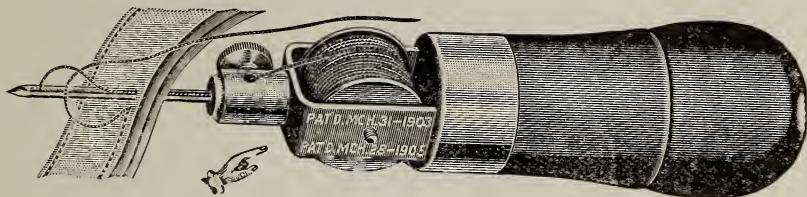
"What do you think of this? Being one of your subscribers, I thought it might be of some interest to your readers to try a new way to tell the age of animals when other marks fail. Take a hair from a horse's tail; pass it through a plain gold ring, and suspend it over a glass half filled with water, just a little above the water. In a short time the ring will begin to vibrate, a little at first, and will increase until it strikes the side of the glass, and the number of times it strikes the glass will be the number of years old the animal is. The hand must be held perfectly still. Brace the arm so that the hand will not tire. Have the ring about four inches from the finger. Don't let the ring touch the water. O."

Is not the above the prince of silly notions?  
Abilene, Texas, Nov. 4. M. E. PRUITT.

My good friend, if the *Farm Journal* published the above without any footnote or protest I fear I shall lose at least a part of my good opinion for that periodical. It is almost the same lingo that we have before mentioned in regard to telling how deep one will have to dig to get water at a point located by a willow switch. It all goes along together; but, may God be praised, such folly is fast getting to be a thing of the past with the progress *true science* is making.

# MR. FARMER

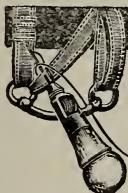
Let the "Perfect" Sewing Awl help solve the problem "You should worry" when you can get a dollar awl for such a little work. . . .



See that thread reel under the finger tips (This principle is right).

Needles in screw top hollow handle.

Sewing Awl mailed direct on your individual order for 50c each, postpaid, and insure safe delivery when the remittance is sent with order.



Repairing Harness



Repairing Shoes



Repairing Buggy Top

THE real Awl with the exposed thread reel in natural position under the finger tips where you can automatically control the tension.

No springs or levers—so simple a child can use it.

Practical, useful, handy—can be carried in the pocket.

This Awl will pay for itself many times over through the convenience derived from such a tool at just the right time.

Will be found to be of special value to every household. It is a practical hand-sewing machine for the speedy repairing of harness, shoes, belts, carpets, canvas—in fact it can be used for all kinds of heavy sewing.

**A PREMIUM** that will not disappoint you. Each Awl is equipped with a supply of waxed thread, diamond point needles, straight and curved, and directions, in suitable mailing carton.

**PREMIUM OFFER.**—We will send one of these awls as premium to any reader who sends us two NEW subscriptions to **GLEANINGS IN BEE CULTURE** for six months at rate of 25 cents each.

**The A. I. Root Company, Medina, O.**

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